

## Course Coordinator Report

### **Course Name: Introduction to Android Programming**

A free Add-On Course for UG students in the Department of Computer Science, Shri Shivaji Education Society Amravati's Science College, Congress Nagar, Nagpur, was held from 16<sup>th</sup> Aug 2022 to 22<sup>nd</sup> October 2022. The course title was "Introduction to Android Programming." This comprehensive beginner to expert course was perfect for anyone who wanted to learn Android programming or enhance their existing skills. Android is the world's most popular mobile operating system, powering millions of devices globally. This course provided the foundation for developing robust and user-friendly Android applications.

In this course, students learned everything about Android Programming, including setting up the development environment, understanding Android architecture, and building simple to complex applications. It was packed full of challenges and exercises to get students writing Android code quickly. The course provided all the necessary tools and knowledge for students to start with Android development. This course was ideal for students interested in the field of mobile app development, providing a solid foundation for creating mobile solutions for various platforms and industries.

At the end of this course, students had the skills and knowledge to develop their own Android applications and were on the path to acquiring more advanced mobile development skills. The course duration was 10 weeks (30 hours). Two theory classes were conducted on Friday and Saturday, and one practical session was held every week. The marking system consisted of 60 marks for the theory paper and 40 marks for practical execution. The theory examination consisted of an MCQ paper with 30 questions, each with four multiple choices. The practical examination was also conducted for 40 marks. 51 students were present in both the theory and practical examinations. The results were prepared, and certificates were distributed to the students.



**Dr. Varsha C. Pande**

**Course Coordinator**

**Assistant Professor**  
**Department of Computer Science**  
**S.S.E.S. Amt's Science College**  
**Congress Nagar, Nagpur**

To,  
The Principal  
SSES Amt's Science College,  
Congress Nagar, Nagpur-12

Subject: Permission to conduct the add on courses in the Computer  
Science department during the session 2022-2023

Respected Sir,

This is to request you that, we wish to conduct the add on courses in  
Computer Science department these are the certificate courses of thirty  
hours' time duration.

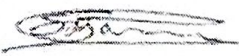
The details of the courses are submitted here with.

Hence please permit to run the same and oblige me.

Thanking you

Yours sincerely

2/07/2022

  
Professor & Head  
Department of Computer Science  
S. S. E. S. Amt's Science College  
Congress Nagar, Nagpur

*Permitted*  
*ADK*

SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR,  
NAGPUR.  
DEPARTMENT OF COMPUTER SCIENCE

**NOTICE**

Date: 04-08-2022

We are excited to announce the commencement of the Android Programming Certificate Course for all BCA Students free of cost starting from 16<sup>th</sup> August to 22<sup>nd</sup> October at Department of Computer science. This course aims to equip you with the skills and knowledge necessary to develop robust and user-friendly applications for the Android platform.

**Course Objectives:**

- Understand the fundamentals of Android development.
- Learn how to design intuitive user interfaces using XML layouts.
- Master activity lifecycle management and event handling.
- Gain proficiency in data storage techniques and networking capabilities.
- Explore advanced topics such as background tasks and Fragments.
- Apply learned concepts through hands-on projects and assignments.
- Course Materials:

Please ensure you have access to a computer with Android Studio installed.  
Additional resources and materials will be provided during the course.

**Course Duration:** 10 Weeks (30 Hours)

**Eligibility:** Open to all students of BCA, Shri Shivaji Education Society Amravati's Science College

**Registration:** Interested students can register at the Department of Computer Science office on or before 13-Aug-2022.

**Contact Information:**

For further details, please contact:

**Dr. Varsha C. Pande**  
Course Coordinator  
Phone: 7972664721

VCP

Assistant Professor  
Department of Computer Science  
S.S.E.S. Am's Science College,  
Congress Nagar, Nagpur



Professor & Head  
Department of Computer Science  
S.S.E.S. Am's Science College,  
Congress Nagar, Nagpur

## CERTIFICATE COURSE IN ANDROID PROGRAMMING

**Free Certificate Course for College Students (BCA)**

**Session: 2022-23**

**Duration - 30 Hours (10 Weeks)**

**Process of Registration- First Come First Served (Limited Seats)**



### Course Objectives:

- Understand the fundamentals of Android development
- build layouts using XML and Java
- debugging tools and techniques for troubleshooting Android applications.
- to create innovative and interactive Android applications that meet industry standards.
- Foster problem-solving skills by tackling challenges.

*course provides a comprehensive introduction to developing applications for the Android platform. Through a combination of theoretical lessons and practical exercises, students will learn the fundamentals of Android development, including user interface design, activity lifecycle management, data storage, and interactivity. The course covers essential topics such as building layouts with XML and Java, handling user input, integrating with external APIs, and debugging applications. Students will gain hands-on experience by working on real-world projects, creating their own Android apps from scratch. By the end of the course, participants will have a solid understanding of Android development principles and be equipped with the skills to build and deploy their own Android applications independently.*



**Department of Computer Science  
S.S.E.S. Amr's Science College, Congress  
Nagar, Nagpur**

VCP

**Assistant Professor  
Department of Computer Science  
S.S.E.S. Amr's Science College,  
Congress Nagar, Nagpur**

**SSES Amravati's Science College, Congress Nagar, Nagpur-12**

**DEPARTMENT OF COMPUTER SCIENCE**

**COURSE MODULE AND SYLLABUS**

**Session 2022-2023**

**Course Title:** Certificate Course in Android Programming

**Course Coordinator:** Dr. Varsha C. Pande

**Course description:** *This Android programming course provides a comprehensive introduction to developing applications for the Android platform. Through a combination of theoretical lessons and practical exercises, students will learn the fundamentals of Android development, including user interface design, activity lifecycle management, data storage, and interactivity. The course covers essential topics such as building layouts with XML and Java, handling user input, integrating with external APIs, and debugging applications. Students will gain hands-on experience by working on real-world projects, creating their own Android apps from scratch. By the end of the course, participants will have a solid understanding of Android development principles and be equipped with the skills to build and deploy their own Android applications independently.*

**Course Objectives:**

The objective of this Android programming course is to equip participants with the knowledge and skills necessary to develop robust and user-friendly applications for the Android platform. By the end of the course, students will:

- Understand the fundamentals of Android development, including UI design and activity lifecycle management.
- Learn how to build layouts using XML and Java, and handle user input effectively.
- Gain proficiency in data storage techniques and integration with external APIs.
- Develop a strong understanding of debugging tools and techniques for troubleshooting Android applications.
- Acquire hands-on experience through practical exercises and real-world projects.
- Cultivate the ability to create innovative and interactive Android applications that meet industry standards.
- Foster problem-solving skills by tackling challenges commonly encountered in Android development.
- Prepare for further exploration and specialization in advanced Android topics or related fields.
- Gain confidence in independently developing, testing, and deploying Android applications for various purposes and audiences.

**Instructional Strategies:** Theory class, Practical, Video clips.

**Evaluation Strategies:** Oral discussions and Final MCQ examination.

**Course outline:** Course Outlines: (Relevance)

### **Module 1: Introduction to Android Development**

- Overview of Android platform
- Setting up development environment
- Introduction to Android Studio IDE
- Creating first Android project
- Understanding project structure

### **Module 2: User Interface Design**

- Basics of UI design in Android
- Working with layouts and views
- Designing user interfaces using XML
- Implementing responsive layouts
- Handling different screen sizes and densities

### **Module 3: Activity Lifecycle Management**

- Understanding the lifecycle of an Android activity
- Managing activity state transitions
- Implementing lifecycle callbacks
- Handling configuration changes

### **Module 4: User Interaction**

- Capturing user input with EditText, Button, and other UI elements
- Responding to user interactions
- Implementing event listeners
- Handling touch events

### **Module 5: Data Storage**

- Introduction to data storage options in Android
- Working with SharedPreferences for simple data storage
- Using SQLite databases for structured data storage
- Implementing CRUD operations with SQLite

### **Module 6: Networking and Integration**

- Making network requests using HTTP libraries
- Parsing JSON and XML data
- Integrating with external APIs
- Handling network security and permissions

### **Module 7: Debugging and Testing**

- Overview of debugging tools in Android Studio
- Debugging techniques for identifying and fixing errors
- Unit testing basics for Android applications
- Testing user interfaces and functionality

### **Module 8: Advanced Topics**

- Implementing background tasks with Async Task and other techniques
- Working with Fragments for flexible UI design
- Exploring Material Design principles
- Implementing animations and transitions

Duration of course: Ten weeks (30 Hours)

The Structure of Syllabus and System of evaluation -

Course	Theory Papers and Practical	Total Marks	
		Theory	Practical
Certificate Course in Android Programming	Theory paper- Android Programming * Theory examination will be of MCQ pattern having 30 questions each with equal marks.	60	40
	* Practical examination will be based on folder and performance evaluation in the laboratory	100	

VCP

Assistant Professor  
Department of Computer Science  
S.S.E.S. Amrta Science College,  
Congress Nagar, Nagpur

# SYLLABUS

Certificate course (10 weeks)

## Theory

### Unit 1: Introduction to Android Development

Overview of the Android platform, Setting up development environment (Android Studio, SDK installation), Creating first Android project, Understanding project structure and components Basics of UI design with XML layouts, Handling user input and basic event handling.

### Unit 2: Core Concepts and Data Management

Activity lifecycle management, Working with views and view groups, Implementing responsive layouts and handling screen sizes, Data storage options in Android (SharedPreferences, SQLite databases), Integrating networking capabilities (HTTP requests, JSON parsing), Debugging and testing Android applications

### Unit 3: Advanced Topics and Project Work

Implementing background tasks and services, Working with Fragments for flexible UI design, Introduction to Material Design principles, Animations and transitions in Android applications, Project-based learning: Applying learned concepts to develop real-world Android applications, Deployment and distribution of Android applications to the Google Play Store,

Note: Each unit will include theoretical lectures, hands-on coding exercises, and project assignments to reinforce learning objectives. The syllabus is subject to adjustment based on the pace of learning and specific needs of the participants.

## PRACTICAL:

### Practical List for Android Programming Course

#### Unit 1: Introduction to Android Development

- Setting up Android Studio and SDK on your computer.
- Creating a basic "Hello World" Android application.
- Exploring the project structure in Android Studio.
- Designing a simple user interface using XML layouts.
- Implementing basic event handling for user interactions.

#### Unit 2: Core Concepts and Data Management

- Managing activity lifecycle: Implementing lifecycle callbacks.
- Creating responsive layouts for various screen sizes and orientations.
- Storing and retrieving data using SharedPreferences.
- Working with SQLite databases to perform CRUD operations.
- Making network requests using HTTP libraries and parsing JSON data.

#### Unit 3: Advanced Topics and Project Work

- Implementing background tasks using AsyncTask or other techniques.



- Designing UIs with Fragments for modularization and flexibility.
- Applying Material Design principles to enhance UI aesthetics and user experience.
- Adding animations and transitions to improve app interactivity.
- Project-based assignments: Developing real-world Android applications, incorporating learned concepts and best practices.
- Deploying and distributing Android applications to the Google Play Store.

Throughout the course, participants will engage in hands-on coding exercises, individual and group projects, and practical assignments to reinforce theoretical concepts and develop practical skills in Android application development.

### Week-wise teaching plan:

Week	Hrs.	Syllabus
Week 1	1	Overview of the Android platform
	1	Setting up development environment (Android Studio, SDK installation)
	1	Creating first Android project
Week 2	1	Understanding project structure
	2	Understanding project components Basics of UI design with XML layouts,
Week 3	1	Handling user input
	2	basic event handling.
Week 4	1	Core Concepts and Data Management: Activity lifecycle management
	2	Working with views and view groups
Week 5	1	Implementing responsive layouts and handling screen sizes
	2	Data storage options in Android (Shared Preferences, SQLite databases)
Week 6	1	Integrating networking capabilities (HTTP requests, JSON parsing)
	2	Debugging and testing Android applications
Week 7	1	Advanced Topics and Project Work:
	2	Implementing background tasks and services
Week 8	1	Working with Fragments for flexible UI design,
	2	Introduction to Material Design principles
Week 9	1	Animations and transitions in Android applications
	2	Project-based learning: Applying learned concepts to develop real-world Android applications,
Week 10	1	Deployment and distribution of Android applications to the Google Play Store
	2	Deployment and distribution of Android applications to the Google Play Store

SSES AMT'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

Certificate Course in Android Programming  
SESSION 2022-2023

**Time Table**

Day	Theory
Friday	VCP (B12) Theory 4.00 PM – 5.00 PM
Saturday	VCP (BCA LAB) practical, 4.00 PM – 5.00 PM
	VCP (B12) Theory, 5.00 PM – 6.00 PM

VCP

Assistant Professor  
Department of Computer Science  
S.S.E.S. Amt's Science College,  
Congress Nagar, Nagpur

# Anchorid Programming

BCA (2022-23) Codelet

(16<sup>th</sup> Aug To 22<sup>nd</sup> Aug)

1. Saurabh Ganesh Gaikwad Gaikwad
2. Nikita Satish Waratkare Nikita
3. Nandini Vijayrao Khanolke Khanolke
4. Payal Jayendra Ambule J. Ambule
5. Prachi Mahesh Hulke Prachi
6. Vaibhavi Dhanpal Patle Vaibhavi
7. Sanil Ramendra Chaudhari Sanil
8. Sanjara Vinod Wale Wale
9. Rajni Manojrao Tipse Tipse
10. Tanu Rajendra Pedhe Pedhe
11. Pooja Rajendra Lohape Lohape
12. Mithala Ramesh Kathe Kathe
13. Pujan Sanjay Shaliare Pujan
14. Aman Bandu Manwatkar Aman
15. Pranjali Chandrakant Karde Karde
16. Pooja Pooja Bijendra Pandey P. Pandey
17. Rupesh Rajendra Ghumare ~~Rupesh~~
18. Samiksha Navendra Nakshane Samiksha
19. Mani Ramdas Prasad Mani Prasad
20. Manas S. Kokate M.S. Kokate
21. Arith Harihar Atkare Arith
22. Nayani S. Borkar Nayani
23. Himanshu K. Deoghare Himanshu

- |                                |               |
|--------------------------------|---------------|
| 24) Om Pankaj . Thorat         | OPT           |
| 25) Aditya S. Nageshwar        | AS Nageshwar  |
| 26) Nisarga S. Hadke           | Nisarga       |
| 27) Pranay V. Gedam            | (P.V. Gedam)  |
| 28) Mughees Ansari             | Mughees       |
| 29) Prathmesh S. Zade          | (P.S. Zade)   |
| 30) Rishita A. Raut            | Raut          |
| 31) Piyush Khandekar           | (Piyush)      |
| 32) Ron S. Faruki              | R Faruki      |
| 33) Sanchali Ramkrusha Dhote   | S-Dhote       |
| 34) Pranali Prabhakar Nagpure  | Pranali       |
| 35) Pranay Vaisnavi Gedam      | (P.V. Gedam)  |
| 36) Sapresh R. Sahare          | (S.R. Sahare) |
| 37) Namrata Thaware            | Namrata       |
| 38) Ruchika S. Meshram         | R Meshram     |
| 39) Yashashree R. Padure       | Y. R Padure   |
| 40) Pawankumar Ramkishor Gokhe | (Paw)         |
| 41) Janvi D. Surkar            | J Surkar      |
| 42. Ankar Suril Dhage          | Dhage         |
| 43. Prashant Kisanji Haradkar  | Haradkar      |
| 44. Nitesh Patil               | Patil         |
| 45. Sarang Narendra Burde.     | Burde.        |
| 46. Vidhi Komal Chandel        | Chandel       |
| 47. Pratibha Tularam Bhujale   | Bhujale       |
| 48. Prajwal Ashokran Chaudhari | Chaudhari     |
| 49. Sapresh R. Sahare          | S.S. Sahare.  |
| 50. Moim Abdul Wahid Khan      | (Khan)        |
| Neha Vijay Vaidya              | Naidya.       |
| Pushpak G. Sakharakar          | P. Sakharakar |
| Prayraj S. Sakharakar          | (S)           |

SSES Amravati's Science College, Congress Nagar, Nagpur-12

**Department of Computer Science**

**Certificate Course (10 Weeks)**

**(Android Programming)**

**Students Registration List**

**Session 2022-23**

<b>Sr. No.</b>	<b>Student Name</b>
1	Mai Ramdas Bansod
2	Manas Shailendra Kokate
3	Moin Abdul Wahid Khan
4	Mughees Ur Shafiqur Rahman Ansari
5	Namrata Pramod Thaware
6	Nandini Vijayrao Khandare
7	Nayani Sunil Borkar
8	Neha Vijay Vaidya
9	Nidhi Komal Chandel
10	Nikita Satish Waratkar
11	Nisarga Sanjay Hadke
12	Nitesh Neharulal Patre
13	Om Pankaj Thorat
14	Pawankumar Ramkishor Gokhe
15	Payal Jayendra Ambule
16	Piyush Chandramani Khandekar
17	Prachi Mahesh Hulke
18	Prajwal Ashokrao Chaudhari
19	Pranali Prabhakar Nagpure
20	Pranay Vaisraj Gedam
21	Pranjali Chandrakant Katre
22	Prashant Kisanaji Hirudkar
23	Prathmesh Shrawan Zade
24	Pratik Tulshiram Bhujade
25	Priti Bijendra Pandey
26	Pujan Sanjay Shahare
27	Rajni Manojrao Pise

28	Rehan Shahejad Faruki
29	Rishita Ashok Raut
30	Ruchika Shankar Meshram
31	Rupesh Rajendra Ghumare
32	Sahil Ravindra Choudhari
33	Samiksha Narendra Nakshane
34	Sanchali Ramkrushna Dhote
35	Sanjana Vinod Wele
36	Sarang Narendra Burde
37	Sarvesh Ramesh Sahare
38	Saurabh Ganesh Gaikwad
39	Tanvi Dinesh Turkar
40	Tanvi Rajeev Dedhe
41	Vaibhavi Dhanpal Patle
42	Yashashree Rameshrao Padwe
43	Aditya Sandeep Nageshwar
44	Aman Bandu Manwatkar
45	Arth Haridas Atkare
46	Himanshu Krushanarao Deoghare
47	Mitali Ramesh Kathe
48	Omkar Sunil Dhage
49	Prajwal Nitin Sakhare
50	Preyas Rajendra Zodape
51	Pushpak Ganesh Sakharkar

VCP

Assistant Professor  
Department of Computer Science  
S. S. E. S. Am's Science College  
Congress Nagar, Nagpur







S. N.	Roll No.	Name of Students	Contact No.	Periods																	Current Month	Progressive Month		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		Att	Deli	Att
				19/8	20/8	20/8	26/8	27/8	27/8	2/9	3/9	3/9	9/9	10/9	10/9	16/9	17/9	17/9	23/9	25/9				
1.	1001	Mai Ramdas Bansod		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
2.	1002	Manas Shailendra Kokate		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
3.	1003	Moin Abdul Wahid Khan		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
4.	1004	Mughees Ur Shafiqur Rahman Ansari		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
5.	1005	Namrata Pramod Thaware		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
6.	1006	Nandini Vijayrao Khandare		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
7.	1007	Nayani Sunil Borkar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
8.	1008	Neha Vijay Vaidya		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
9.	1009	Nidhi Komal Chandel		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
10.	1010	Nikita Satish Waratkar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
11.	1011	Nisarga Sanjay Hadke		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
12.	1012	Nitesh Neharulal Patre		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
13.	1013	Om Pankaj Thorat		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
14.	1014	Pawankumar Ramkishor Gokhe		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
15.	1015	Payal Jayendra Ambule		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
16.	1016	Piyush Chandramani Khandekar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
17.	1017	Prachi Mahesh Hulke		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
18.	1018	Prajwal Ashokrao Chaudhari		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
19.	1019	Pranali Prabhakar Nagpure		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
20.	1020	Pranay Vaisraj Gedam		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
21.	1021	Pranjali Chandrakant Katre		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
22.	1022	Prashant Kisanaji Hirudkar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
23.	1023	Prathmesh Shrawan Zade		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
24.	1024	Pratik Tulshiram Bhujade		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
25.	1025	Priti Bijendra Pandey		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
26.	1026	Pujan Sanjay Shahare		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
27.	1027	Rajni Manojrao Pise		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
28.	1028	Rehan Shahejad Faruki		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			



SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR,  
NAGPUR

Certificate Course on **Android Programming**

Announcement of Theory and Practical Examination Dates for **Android Programming** Certificate  
Course

**NOTICE**

Date: 24-October-2022

This is to inform all students enrolled in the Certificate Course on Android Programming that the dates for the Theory and Practical Examinations have been scheduled as follows:

**Theory Examination:**

- Date: -28-10-2022
- Time: 04:00 pm
- Venue: Room No B12

**Practical Examination:**

- Date: 29-10-2022
- Time: 04:00 pm
- Venue: BCA Lab, 3<sup>rd</sup> Floor

All students are required to be present at the examination venue at least 15 minutes before the scheduled time. Please ensure you bring your college ID card and any other necessary materials.


For any further queries, please contact the Department of Computer Science office.

Dr. Varsha.C. Pande

Course Co-ordinator



Assistant Professor  
Department of Computer Science  
S.S.E.S. Amr's Science College,  
Congress Nagar, Nagpur

  
Professor & Head  
Department of Computer Science  
S.S.E.S. Amr's Science College,  
Congress Nagar Nagpur

Shri Shivaji Education Society Amravati's  
Science College, Congress Nagar, Nagpur.

Certified Course in Android Programming  
Test Examination 2022-23  
Attendance Sheet

Date: 28<sup>th</sup> October 2022


Sr. No.	Roll Number	Name Of Student	Signature of Student
1	1001	Mai Ramdas Bansod	<u>M. Bansod</u>
2	1002	Manas Shailendra Kokate	<u>M.S. Kokate</u>
3	1003	Moin Abdul Wahid Khan	<u>Moin</u>
4	1004	Mughees Ur Shafiqur Rahman Ansari	<u>Ansari</u>
5	1005	Namrata Pramod Thaware	<u>Thaware</u>
6	1006	Nandini Vijayrao Khandare	<u>Nandini</u>
7	1007	Nayani Sunil Borkar	<u>Nayani</u>
8	1008	Neha Vijay Vaidya	<u>Naidya</u>
9	1009	Nidhi Komal Chandel	<u>Nidhi</u>
10	1010	Nikita Satish Waratkar	<u>Nikita</u>
11	1011	Nisarga Sanjay Hadke	<u>Nisarga</u>
12	1012	Nitesh Neharulal Patre	<u>Nitesh</u>
13	1013	Om Pankaj Thorat	<u>OPT</u>
14	1014	Pawankumar Ramkishor Gokhe	<u>Pawankumar</u>
15	1015	Payal Jayendra Ambule	<u>P. Ambule</u>
16	1016	Piyush Chandramani Khandekar	<u>Piyush</u>
17	1017	Prachi Mahesh Hulke	<u>Prachi</u>
18	1018	Prajwal Ashokrao Chaudhari	<u>Prachari</u>
19	1019	Pranali Prabhakar Nagpure	<u>Pranali</u>
20	1020	Pranay Vaisraj Gedam	<u>P.V. Gedam</u>

21	1021	Pranjali Chandrakant Katre	Katre
22	1022	Prashant Kisanaji Hirudkar	Hirudkar
23	1023	Prathmesh Shrawan Zade	P.S. Zade
24	1024	Pratik Tulshiram Bhujade	Bhujade
25	1025	Priti Bijendra Pandey	P. Pandey
26	1026	Pujan Sanjay Shahare	Pujari
27	1027	Rajni Manojrao Pise	R. Pise
28	1028	Rehan Shahejad Faruki	R. Faruki
29	1029	Rishita Ashok Raut	Raut
30	1030	Ruchika Shankar Meshram	Rameshram
31	1031	Rupesh Rajendra Ghumare	Rupesh
32	1032	Sahil Ravindra Choudhari	Sahil
33	1033	Samiksha Narendra Nakshane	Samiksha
34	1034	Sanchali Ramkrushna Dhote	S. Dhote
35	1035	Sanjana Vinod Wele	Wele
36	1036	Sarang Narendra Burde	Burde
37	1037	Sarvesh Ramesh Sahare	Sarvesh
38	1038	Saurabh Ganesh Gaikwad	Gaikwad
39	1039	Tanvi Dinesh Turkar	Turkar
40	1040	Tanvi Rajeev Dedhe	Dedhe
41	1041	Vaibhavi Dhanpal Patle	Vaibhavi
42	1042	Yashashree Rameshrao Padwe	Y.R. Padwe
43	1043	Aditya Sandeep Nageshwar	A. Nageshwar
44	1044	Aman Bandu Manwatkar	Aman
45	1045	Arth Haridas Atkare	Arth

46	1046	Himanshu Krushanarao Deoghare	H. Deoghare
47	1047	Mitali Ramesh Kathe	M. Kathe
48	1048	Omkar Sunil Dhage	O. Dhage
49	1049	Prajwal Nitin Sakhare	P. Sakhare
50	1050	Preyas Rajendra Zodape	P. Zodape
51	1051	Pushpak Ganesh Sakharkar	P. Sakharkar

VCP




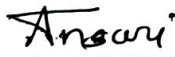
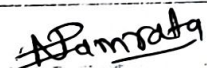
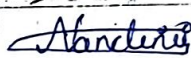
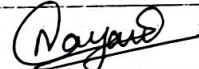


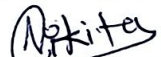




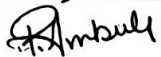
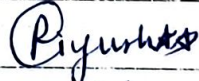
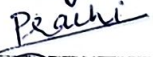
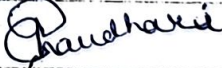
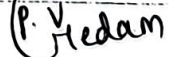
Assistant Professor  
Department of Computer Science  
S.S.E.S. Am's Science College,  
Congress Nagar, Nagpur

  
Professor & Head  
Department of Computer Science  
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Shri Shivaji Education Society Amravati's  
Science College, Congress Nagar, Nagpur.

Certified Course in Android Programming  
Practical Examination 2022-23  
Attendance Sheet

Date: 29<sup>th</sup> October 2022

Sr. No.	Roll Number	Name Of Student	Signature of Student
1	1001	Mai Ramdas Bansod	
2	1002	Manas Shailendra Kokate	
3	1003	Moin Abdul Wahid Khan	
4	1004	Mughees Ur Shafiqur Rahman Ansari	
5	1005	Namrata Pramod Thaware	
6	1006	Nandini Vijayrao Khandare	
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16	1016	Piyush Chandramani Khandekar	
17	1017	Prachi Mahesh Huike	
18	1018	Prajwal Ashokrao Chaudhari	
19	1019	Pranali Prabhakar Nagpure	




20	1020	Pranay Vaisraj Gedam	<u>P.V. Gedam</u>
21	1021	Pranjali Chandrakant Katre	<u>P.Katre</u>
22	1022	Prashant Kisanaji Hirudkar	<u>A. Hirudkar</u>
23	1023	Prathmesh Shravan Zade	<u>P.S. Zade</u>
24	1024	Pratik Tulshiram Bhujade	<u>P. Bhujade</u>
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VCP

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Congress Nagar Nagpur

**SSES Amravati's Science College, Congress Nagar, Nagpur-12**

**DEPARTMENT OF COMPUTER SCIENCE**

**Session 2022-2023**

**Certificate Course Examination**

**Course Name: Android Programming**

**Time: 60 Minutes]**

**[Max. Marks: 40**

**Practical Exam Slip**

**Unit 1: Introduction to Android Development**

- Setting up Android Studio and SDK on your computer.
- Creating a basic "Hello World" Android application.
- Exploring the project structure in Android Studio.
- Designing a simple user interface using XML layouts.
- Implementing basic event handling for user interactions.

**Unit 2: Core Concepts and Data Management**

- Managing activity lifecycle: Implementing lifecycle callbacks.
- Creating responsive layouts for various screen sizes and orientations.
- Storing and retrieving data using SharedPreferences.
- Working with SQLite databases to perform CRUD operations.
- Making network requests using HTTP libraries and parsing JSON data.

**Unit 3: Advanced Topics and Project Work**

- Implementing background tasks using AsyncTask or other techniques.
- Designing UIs with Fragments for modularization and flexibility.
- Applying Material Design principles to enhance UI aesthetics and user experience.
- Adding animations and transitions to improve app interactivity.
- Project-based assignments: Developing real-world Android applications, incorporating learned concepts and best practices.
- Deploying and distributing Android applications to the Google Play Store.

Throughout the course, participants will engage in hands-on coding exercises, individual and group projects, and practical assignments to reinforce theoretical concepts and develop practical skills in Android application development.



**Assistant Professor**  
**Department of Computer Science**  
**S.S.E.S. Am't's Science College**  
**Congress Nagar, Nagpur**

SSES Amravati's Science College, Congress Nagar, Nagpur-12

DEPARTMENT OF COMPUTER SCIENCE

Final Examination

Session 2022-2023

Certificate Course in Android Programming

Maximum Marks: 60

Students Name: \_\_\_\_\_

Roll No: \_\_\_\_\_ Date: \_\_\_\_\_ Time: 1 HOUR

Name and Signature of Invigilator: \_\_\_\_\_

Note: 1. All Questions are compulsory and carry equal marks.  
2. Tick the Correct option only.

1. What is the primary Integrated Development Environment (IDE) used for Android app development?  
a) Eclipse                      b) Visual Studio                      c) Android Studio                      d) IntelliJ IDEA
2. Which file is responsible for defining the structure of the user interface in an Android app?  
a) MainActivity.java                      b) activity\_main.xml  
c) AndroidManifest.xml                      d) strings.xml
3. Which method is called by the Android system when an activity is first created?  
a) onStart()                      b) onCreate()                      c) onResume()                      d) onInit()
4. What is the purpose of SharedPreferences in Android development?  
a) To store and retrieve key-value pairs persistently.                      b) To manage SQLite databases.  
c) To handle network requests.                      d) To implement background tasks.
5. Which layout manager is commonly used to create responsive layouts in Android?  
a) LinearLayout                      b) RelativeLayout                      c) ConstraintLayout                      d) FrameLayout
6. Which class is used to perform CRUD operations on a local SQLite database in Android?  
a) SQLiteOpenHelper                      b) SQLiteDatabase  
c) SQLiteManager                      d) SQLHelper
7. Which HTTP client library is commonly used for making network requests in Android?  
a) OkHttp                      b) Volley                      c) Retrofit                      d) Apache HttpClient
8. Which method is used to add an event listener to a Button in Android?  
a) setOnClickListener()                      b) addOnClickListener()  
c) setOnTouchListener()                      d) addOnTouchListener()
9. Which lifecycle method of an activity is called when the activity is no longer visible to the user?  
a) onStop()                      b) onDestroy()                      c) onPause()                      d) onExit()
10. What is the purpose of the AsyncTask class in Android?  
a) To perform background tasks asynchronously.                      b) To handle user input events.  
c) To manage application resources.                      d) To interact with external APIs.
11. Which XML attribute is used to specify the layout behavior of a view in ConstraintLayout?  
a) android:layout\_width                      b) android:layout\_height

c) app:layout\_constraintStart\_toStartOf      d) app:layout\_constraintTop\_toTopOf

12. Which method is used to inflate a layout resource in an activity?

- a) inflateLayout()      b) setContentView()  
c) createLayout()      d) loadLayout()

13. Which component is responsible for managing the navigation flow between different screens in an Android app?

- a) Activity      b) Fragment      c) Intent      d) Service

14. Which layout manager is best suited for building complex and flexible UIs in Android?

- a) LinearLayout      b) RelativeLayout      c) ConstraintLayout      d) FrameLayout

15. Which attribute is used to specify the orientation of a LinearLayout?

- a) android:orientation      b) android:layout\_width  
c) android:layout\_height      d) android:gravity

16. What is the purpose of the AndroidManifest.xml file?

- a) To define the layout of the user interface.      b) To specify the permissions required by the app.  
c) To manage database operations.      d) To handle background tasks.

17. Which method is called when an AsyncTask is executed?

- a) doInBackground()      b) onPreExecute()      c) onPostExecute()      d) onCancelled()

18. Which class is used to make HTTP GET and POST requests in Android?

- a) HttpURLConnection      b) HttpClient      c) HttpURLConnection      d) HTTPSURLConnection

19. What is the primary purpose of using Fragments in Android development?

- a) To manage activity lifecycle callbacks.      b) To handle user input events.  
c) To create modular and reusable UI components.      d) To perform background tasks.

20. Which method is called when a user interacts with a MenuItem in an Android app?

- a) onOptionsItemSelected()      b) onItemClick()  
c) onOptionsSelected()      d) onItemSelected()

21. Which layout manager is used to display a list of scrollable items in Android?

- a) RecyclerView      b) GridView      c) ListView      d) ScrollView

22. Which component is responsible for running long-running background tasks independently of the UI?

- a) Activity      b) BroadcastReceiver      c) Service      d) ContentProvider

23. Which method is used to start a new activity in Android?

- a) startActivity()      b) startActivityForResult()      c) startService()      d) broadcastIntent()

24. What is the purpose of the XML file named "strings.xml" in an Android project?

- a) To define the layout of the user interface.      b) To manage localized string resources.  
c) To handle database operations.      d) To specify app permissions.

25. Which method is called when an activity is brought to the foreground after being paused?

- a) onStart()      b) onResume()      c) onRestart()      d) onCreate()

26. Which component is responsible for managing app-wide data storage and retrieval in Android?

- a) Activity      b) Fragment      c) Intent      d) SharedPreferences

27. What is the purpose of the "R.java" file in an Android project?

- a) To store application resources such as layout files and images.

- b) To generate unique IDs for resources defined in XML files.
- c) To handle database operations.
- d) To manage activity lifecycle callbacks.

28. Which method is called to handle the result of a user action initiated by `startActivityForResult()`?

- a) `onActivityResult()`
- b) `onRequestPermissionsResult()`
- c) `onPermissionResult()`
- d) `onResult()`

29. What is the primary purpose of using a `RecyclerView` over a `ListView` in Android?

- a) `RecyclerView` provides better performance and more flexible item layouts.
- b) `ListView` is deprecated and no longer recommended for new development.
- c) `RecyclerView` simplifies data binding and adapter implementation.
- d) `ListView` supports only vertical scrolling, whereas `RecyclerView` supports both vertical and horizontal scrolling.

30. Which method is called when an activity is no longer visible and is about to be destroyed?

- a) `onStop()`
- b) `onDestroy()`
- c) `onPause()`
- d) `onFinish()`

Answers:

- 1) c) Android Studio
- 2) b) activity\_main.xml
- 3) b) onCreate()
- 4) a) To store and retrieve key-value pairs persistently.
- 5) c) ConstraintLayout
- 6) a) SQLiteOpenHelper
- 7) a) OkHttpClient
- 8) a) setOnClickListener()
- 9) c) onPause()
- 10) a) To perform background tasks asynchronously.
- 11) c) app:layout\_constraintStart\_toStartOf
- 12) b) setContentView()
- 13) c) Intent
- 14) c) ConstraintLayout
- 15) android:orientation ~
- 16) b) To specify the permissions required by the app.
- 17) doInBackground() (a)
- 18) b) HttpURLConnection
- 19) c) To create modular and reusable UI components.
- 20) onOptionsItemSelected() ~
- 21) RecyclerView a
- 22) c) Service
- 23) startActivity() a
- 24) b) To manage localized string resources.
- 25) b) onResume()
- 26) d) SharedPreferences
- 27) b) To generate unique IDs for resources defined in XML files.
- 28) a) onActivityResult()
- 29) a) RecyclerView provides better performance and more flexible item layouts.
- 30) b) onDestroy()

Shri Shivaji Education Society Amravati's  
Science College, Congress Nagar, Nagpur.

Certified Course in Android Programming  
Test Examination 2022-23  
Result Sheet

Date:

Sr. No.	Roll Number	Name Of Student	Marks Theory (60)	Marks Practical (40)	Total Marks (100)	Grade
1	1001	Mai Ramdas Bansod	30	27	57	A
2	1002	Manas Shailendra Kokate	42	33	75	A
3	1003	Moin Abdul Wahid Khan	32	27	59	B+
4	1004	Mughees Ur Shafiqur Rahman Ansari	38	33	71	A
5	1005	Namrata Pramod Thaware	28	35	63	A
6	1006	Nandini Vijayrao Khandare	24	25	49	B
7	1007	Nayani Sunil Borkar	26	32	56	B+
8	1008	Neha Vijay Vaidya	42	35	77	A+
9	1009	Nidhi Komal Chandel	48	31	79	A+
10	1010	Nikita Satish Waratkar	54	33	87	A+
11	1011	Nisarga Sanjay Hadke	38	27	65	A
12	1012	Nitesh Neharulal Patre	20	28	48	B
13	1013	Om Pankaj Thorat	42	31	73	A
14	1014	Pawankumar Ramkishor Gokhe	50	38	88	A+
15	1015	Payal Jayendra Ambule	40	32	72	A
16	1016	Piyush Chandramani Khandekar	38	28	66	A
17	1017	Prachi Mahesh Hulke	46	34	80	A+
18	1018	Prajwal Ashokrao Chaudhari	40	28	68	A
19	1019	Pranali Prabhakar Nagpure	52	33	85	A+




20	1020	Pranay Vaisraj Gedam	28	34	62	A
21	1021	Pranjali Chandrakant Katre	54	29	83	A+
22	1022	Prashant Kisanaji Hirudkar	50	29	79	A+
23	1023	Prathmesh Shrawan Zade	28	34	62	B+
24	1024	Pratik Tulshiram Bhujade	30	26	56	B+
25	1025	Priti Bijendra Pandey	22	34	56	B+
26	1026	Pujan Sanjay Shahare	22	27	49	B
27	1027	Rajni Manojrao Pise	54	29	83	A+
28	1028	Rehan Shahejad Faruki	28	28	56	B+
29	1029	Rishita Ashok Raut	52	32	84	A+
30	1030	Ruchika Shankar Meshram	42	29	71	A
31	1031	Rupesh Rajendra Ghumare	28	28	56	B+
32	1032	Sahil Ravindra Choudhari	44	29	73	A
33	1033	Samiksha Narendra Nakshane	24	34	58	B+
34	1034	Sanchali Ramkrushna Dhote	54	34	88	A+
35	1035	Sanjana Vinod Wele	34	34	68	A
36	1036	Sarang Narendra Burde	32	29	61	A
37	1037	Sarvesh Ramesh Sahare	38	27	65	A
38	1038	Saurabh Ganesh Gaikwad	42	30	72	A
39	1039	Tanvi Dinesh Turkar	40	26	66	A
40	1040	Tanvi Rajeev Dedhe	40	26	66	A
41	1041	Vaibhavi Dhanpal Patle	32	26	58	B+
42	1042	Yashashree Rameshrao Padwe	48	35	83	A+
43	1043	Aditya Sandeep Nageshwar	32	28	60	A
44	1044	Aman Bandu Manwatkar	44	29	73	A

45	1045	Arth Haridas Atkare	46	34	80	A+
46	1046	Himanshu Krushanarao Deoghare	46	35	81	A+
47	1047	Mitali Ramesh Kathe	54	34	88	A+
48	1048	Omkar Sunil Dhage	42	29	71	A
49	1049	Prajwal Nitin Sakhare	20	32	52	B+
50	1050	Preyas Rajendra Zodape	46	35	81	A
51	1051	Pushpak Ganesh Sakharkar	36	33	69	A

VCP

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Shri Shivaji Education Society, Amravati's  
**SCIENCE COLLEGE**  
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 Institutional Member of APQN  
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 Mentor College under 'PARAMARSHI Scheme', UGC, New Delhi

**Add-on Course**

Course Exam Name: **Certificate Course in Android Programming**

Name of Student:

Mai R. Bainsol

Roll No.:

1001

Session: 2022-23

Test Date: 17/03/23

Max. Marks: 60

Invigilator Signature

Obtained Marks:

30

**INSTRUCTIONS FOR FILLING THE SHEET**

- This sheet should not be folded or crushed.
- Use only blue/black ball point pen to fill the circles.
- Use of pencil is strictly prohibited.
- Circles should be darkened completely and properly.
- Cutting and erasing on this sheet is not allowed.
- Do not use any stray marks on the sheet.
- Do not use marker or white fluid to hide the mark.

WRONG METHODS

CORRECT METHOD



A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D					
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4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	14	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	24	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	34	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	44	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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7	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	17	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	27	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	37	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	47	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	18	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	28	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	38	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	48	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Shri Shivaji Education Society Amravati's  
**SCIENCE COLLEGE, CONGRESS NAGAR,  
NAGPUR**

Accredited with CGPA of 3.51 at 'A+' Grade  
A College with Potential for Excellence



## CERTIFICATE

This is to certify that  
**Mai Ramdas Bansod**

Is awarded with certificate on successful completion of the course entitled, certificate course in  
**"Android Programming."**

Session 2022-23 under Add-on course conducted for **30 hours from 16/08/2022 to 22/08/2022** by  
Department of Computer Science, SSESAs, Science College, Congress Nagar, Nagpur 440012.

He/She has passed the Examination with **"A"** Grade.

Dr. V. C. Pande  
Coordinator

Dr. S. R. Pande  
Head of Department

Dr. M. P. Dhore  
Principal

**Action Taken:**

A free Add-On Course for UG students in the Department of Computer Science, Shri Shivaji Education Society Amravati's Science College, Congress Nagar, Nagpur was held from 16<sup>th</sup> August 2022 to 22<sup>nd</sup> October 2022. The course title was "Introduction to Android Programming". 51 students appeared and passed in both theory and practical examination. The result was prepared and certificates were distributed to the students.

**Shri Shivaji Education Society Amravati's Science College,  
Congress Nagar, Nagpur**

**Add on Course in Android Programming Feedback Form**

Name of Student.....

Please rate the following aspects of the program on a scale from 1 to 5, with

1. Best	2. Excellent	3. Good	4. Satisfactory	5. Fair
---------	--------------	---------	-----------------	---------

**Q.1** How would you rate the organization and structure of the course?

1       2       3       4       5

**Q.2** How do you rate the quality of the delivery of the units by the Teacher?

1       2       3       4       5

**Q.3** How useful were the hands-on assignments and projects in enhancing your practical understanding of Android programming?

1       2       3       4       5

**Q.4** How well-organized was the course structure, including the sequencing of topics and the pacing of the material?

1       2       3       4       5

**Q.5** Overall, how would you rate your learning experience in this Android Programming?

1       2       3       4       5

**Q.6 Any Suggestions:**

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## Feedback Analysis

1. Number of Students Registered for the Course :51
2. Number of Students submitted the Feedback :46
3. Question wise analysis of the Feedback:

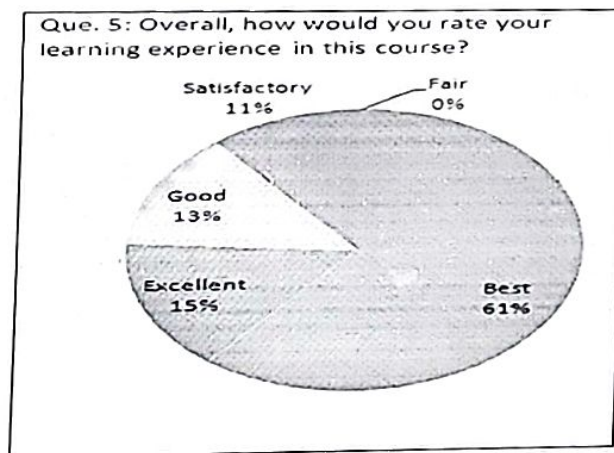
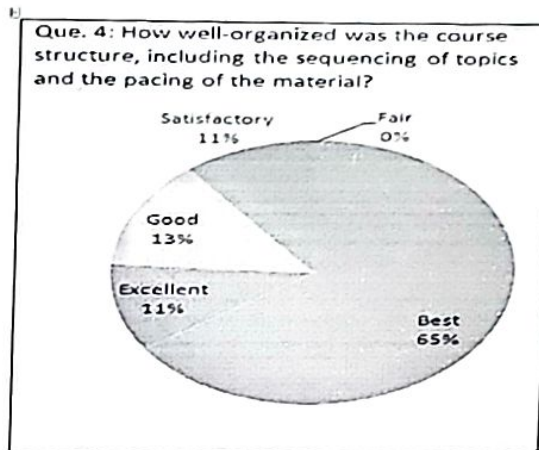
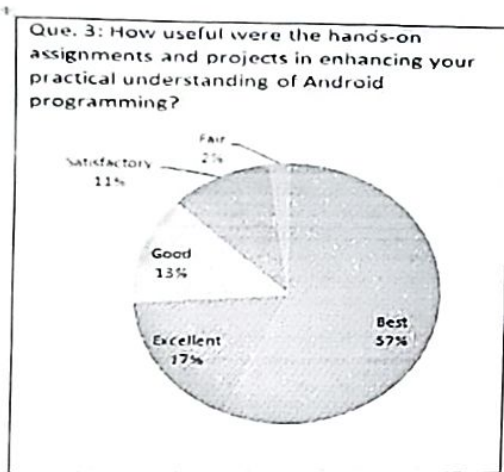
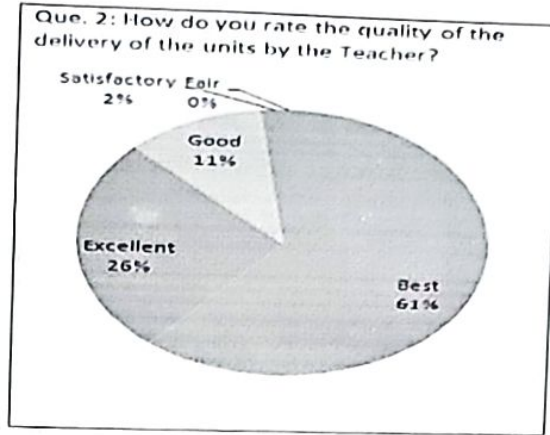
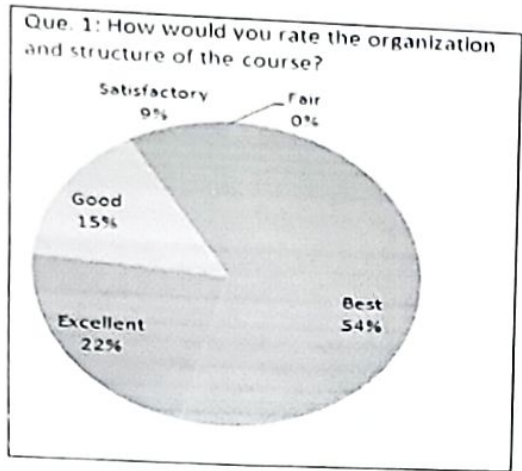
Sr. No	Question	Responses in Percentage (%)				
		Best	Excellent	Good	Satisfactory	Fair
1)	How would you rate the organization and structure of the course?	54.34	22.73	15.21	8.69	0
2)	How do you rate the quality of the delivery of the units by the Teacher?	60.86	26.08	10.86	2.17	0
3)	How useful were the hands-on assignments and projects in enhancing your practical understanding of Android programming?	56.52	17.39	13.04	10.86	2.17
4)	How well-organized was the course structure, including the sequencing of topics and the pacing of the material?	65.21	10.86	13.04	10.86	0
5)	Overall, how would you rate your learning experience in this course?	60.86	15.20	13.04	10.86	0
6)	Any Suggestions	No Suggestions: 50% Remaining Comments: Good Course, Nice Course, Change the timing of Classes				

Remark: Students commented that the course will be useful in professional life.

Department will keep on improving the quality of the course.

# Certificate course: Android programming (2022-23)

## Feedback Analysis






**Action Taken:**

A free Add-On Course for UG students in the Department of Computer Science, Shri Shivaji Education Society Amravati's Science College, Congress Nagar, Nagpur was held from 16<sup>th</sup> August 2022 to 22<sup>nd</sup> October 2022. The course title was "Introduction to Android Programming". 51 students appeared and passed in both theory and practical examination. The result was prepared and certificates were distributed to the students.



Assistant Professor  
Department of Computer Science  
S.S.E.S. Am's Science College  
Congress Nagar, Nagpur



**IQAC Coordinator**  
Science College,  
Congress Nagar Nagpur

**Shri Shivaji Education Society Amravati's Science College,  
Congress Nagar, Nagpur**

**Add on Course in Android Programming Feedback Form**

Name of Student.....

Please rate the following aspects of the program on a scale from 1 to 5, with

1. Best	2. Excellent	3. Good	4. Satisfactory	5. Fair
---------	--------------	---------	-----------------	---------

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**Q.5** Overall, how would you rate your learning experience in this Android Programming?

1       2       3       4       5

**Q.6 Any Suggestions:**

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## Feedback Analysis

1. Number of Students Registered for the Course :51
2. Number of Students submitted the Feedback :46
3. Question wise analysis of the Feedback:

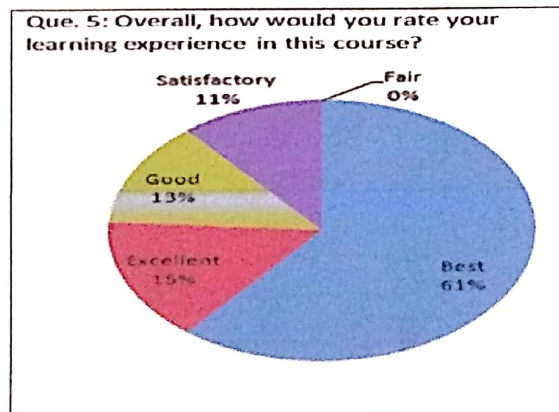
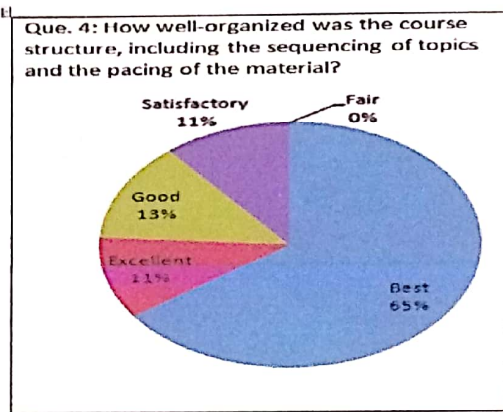
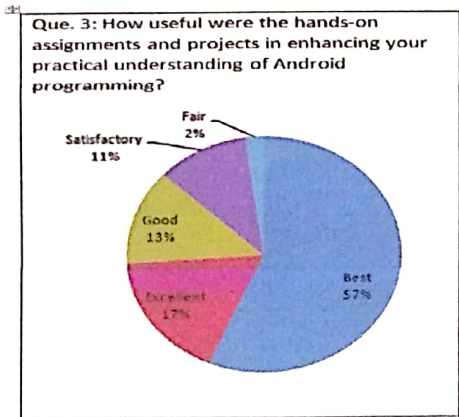
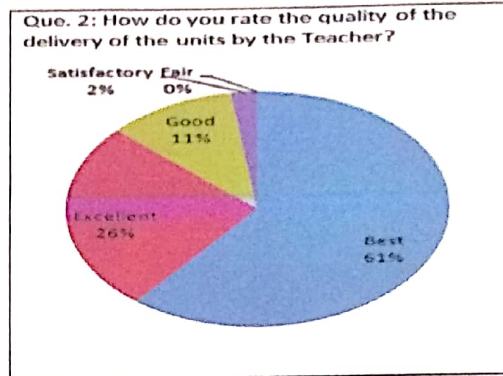
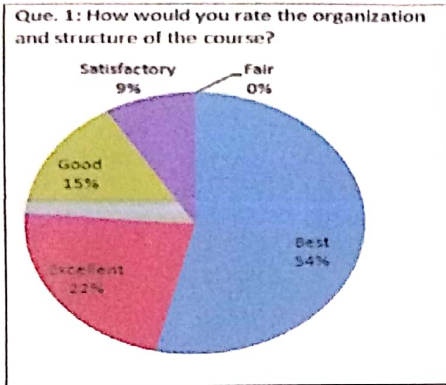
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5)	Overall, how would you rate your learning experience in this course?	60.86	15.20	13.04	10.86	0
6)	Any Suggestions	No Suggestions: 50% Remaining Comments: Good Course, Nice Course, Change the timing of Classes				

Remark: Students commented that the course will be useful in professional life.

Department will keep on improving the quality of the course.

Certificate course: Android programming (2023-24)

Feedback Analysis



**IQAC Coordinator**  
Science College,  
Congress Nagar Nagpur

**Assistant Professor**  
Department of Computer Science  
S.S.E.S. Am's Science College  
Congress Nagar, Nagpur