KG REDDY College of Engineering & Technology
AN AUTONOMOUS INSTITUTION

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

FULL STACK DEVELOPMENT LABORATORY

Subject Code :KG23ACS317

Regulation : KGR23

AcademicYear :2025-2026

III B. TECH II SEMESTER

COMPUTER SCIENCE AND ENGINEERING

KGREDDYCOLLEGEOFENGINEERINGANDTECHNOLOGY

Affiliated by JNTUH,Chilkur,(V),Moinabad(M)R.RDist,TS-501504

KG REDDY College of Engineering & Technology
AN AUTONOMOUS INSTITUTION

VISION AND MISSION OF THE INSTITUTION

VISION:

To become an institution which is internationally recognized for its holistic approach to engineering, innovative teaching and learning culture, research and entrepreneurial ecosystem, And sustainable social impact in the community.

MISSION:

• To offer undergraduate and post-graduate programs which are supported through industry relevant curriculum and innovative teaching and learning processes that would help students succeed in their professional careers.
• To provide faculty and students with an ecosystem that fosters innovation,research, entrepreneurship, and international exposure through strategic partnerships with government organizations and collaboration with industries.
• To provide holistic learning environment to students which will contribute to their personal and Professional growth and enable them to become leaders in the irrespective fields.
• To contribute to the development of the region by using our technological expertise to work with nearby communities and support them in their social and economic development.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VISION:

To be recognized as a department of excellence by stimulating a learning environment in which students and faculty will thriveand grow to achieve their professional,institution a land Societal goals.

MISSION:

• To provide high quality technical education to students that will enable life-long learning and Build expertise in advanced technologies in Computer Science and Engineering.
• To promote research and development by providing opportunities to solve complex engineering problems in collaboration with industry and government agencies.
• To encourage professional development of students that will in culcate ethical values and leadership skills through entrepreneurship while working with the community to address societalissues.

PROGRAMEDUCATIONALOBJECTIVES

PEO1: Graduates will provide solutions to difficult and challenging issues in their profession by applying computer science and engineering theory and principles.
PEO2: Graduate shave successful careers in computer science and engineering fields or will be able to successfully pursue advanced degrees.
PEO3: Graduates will communicate effectively ,work collaboratively and exhibit high levels of professionalism, moral and ethical responsibility.
PEO4: Graduates will develop the ability to understand and analyze engineering issues in a broader perspective with ethical responsibility towards sustainable development.

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PROGRAMOUTCOMES

POI: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
POII: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems, reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
POIII: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental factors.
PO IV: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.
POV: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling, to complex engineering activities with an understanding of limitations. .
POVI: The engineer and society: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal, and cultural issues and the responsibilities relevant to professional engineering practice. .
POVII: Environment and sustainability: Understand the impact of professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.
POVIII: Ethics: Apply ethical principles and commit to professional ethics, responsibilities, and norms of engineering practice.
POIX: Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams and multidisciplinary settings.
POX: Communication: Communicate effectively on complex engineering activities with the engineering community and society at large, including writing reports, preparing design documentation, making presentations, and giving and receiving clear instructions. .
POXI: Project management and finance: Demonstrate knowledge and understanding of engineering and management principles and apply these as a member and leader in a team to manage projects in multidisciplinary environments.
PO XII: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the context of technological change

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PROGRAM SPECIFIC OUTCOMES

PSO1: Computer Science and Engineering graduates will be able to analyze, design, develop, and test intelligent systems using mathematical foundations and management principles, and apply computational solutions to develop secure applications and hardware prototypes.
PSO2: Graduates will be able to analyze contemporary research issues in various areas of Computer Science and Engineering, identify research gaps, and conduct research in specialized or emerging fields.
PSO3: Graduates will develop skills to solve problems in programming concepts, evaluate environmental and social issues with ethical responsibility, and manage projects in multidisciplinary fields, fostering careers, entrepreneurship, and higher studies.

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MOBILE APPLICATION DEVELOPMENT LABORATORY

Course Code: KG23ACS322 **LTPC**

B.Tech. III Year II Sem **0 0 2 1**

Course Objectives: The objectives of this course for the students are to:

1. Learn how to develop Applications in an android environment.
2. Learn how to develop user interface applications.
3. Learn how to develop URL related applications.
4. Program mobile applications for the Android operating system that use basic and advanced phone features
5. Deploy applications to the Android marketplace for distribution.

Course Outcomes:

1. **CO 1:** Understand the working of Android OS Practically. (k2)
2. **CO 2:** Develop user interfaces. (K6)
3. **CO 3:** Develop, deploy and maintain the Android Applications.(k6)
4. **CO 4:** Design persistent data storage for android operating systems. (K6)
5. **CO 5:** Develop Android applications for real-world use. (K6)

List of Experiments

S.No	Name ofThe Experiment
1	**A)** Create an Android application that shows Hello <name> of the user and run it on an emulator. **B)** Create an application that takes the name from a text box and shows a hello message along with the name entered in the text box when the user clicks the OK button.
2	Create a screen that has input boxes for User Name, Password, Address, Gender (radio buttons for male and female), Age (numeric), Date of Birth (DatePicker), State (Spinner), and a Submit button. On clicking the submit button, print all the data below the Submit button. Use (a) Linear Layout (b) Relative Layout and (c) Grid Layout or Table Layout.
3	Develop an application that shows names as a list and on selecting a name it should show the details of the candidate on the next screen with a "Back" button. If the screen is rotated to landscape mode (width greater than height), then the screen should show the list on the left fragment and details on the right fragment instead of the second screen with the back button. Use Fragment transactions and Rotation event listeners.
4	Develop an application that uses a menu with 3 options for dialing a number, opening a website, and sending an SMS. On selecting an option, the appropriate action should be invoked using intents.
5	Develop an application that inserts some notifications into the Notification area and whenever a notification is inserted, it should show a toast with details of the notification.
6	Create an application that uses a text file to store usernames and passwords (tab-separated fields and one record per line). When the user submits a login name and password through a screen, the details should be verified with the text file data and if they match, show a dialog saying that login is successful. Otherwise, show a dialog with a Login Failed message.
7	Create a user registration application that stores the user details in a database table.
8	Create a database and a user table where the details of login names and passwords are stored. Insert some names and passwords initially. Now the login details entered by the user should be verified with the database and an appropriate dialog should be shown to the user.
9	Create an admin application for the user table, which shows all records as a list and the admin can select any record for edit or modify. The results should be reflected in the table.
10	Develop an application that shows all contacts of the phone along with details like name, phone number, mobile number, etc.
11	Create an application that saves user information like name, age, gender, etc. in Shared Preferences and retrieves them when the program restarts.
12	Create an alarm that rings every Sunday at 8:00 AM. Modify it to use a TimePicker to set the alarm time

TEXTBOOK:

1. Professional Android 4 Application Development – Reto Meier, Wiley India (Wrox), 2012.
2. Android Application Development for Java Programmers – James C. Sheusi, Cengage, 2013.

REFERENCE BOOKS:

1.Beginning Android 4 Application Development – Wei-Meng Lee, Wiley India (Wrox), 2013.

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Experiment-1: A) Create an Android application that shows Hello <name> of the user and run it on an emulator.
B) Create an application that takes the name from a text box and shows a hello message along with the name entered in the text box when the user clicks the OK button.

A) Program:

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    android:padding="16dp">
    <TextView
        android:id="@+id/tvHello"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello User"
        android:textSize="24sp"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.helloapp;
import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
  @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        TextView tvHello = findViewById(R.id.tvHello);
        tvHello.setText("Hello John"); // Replace John with your name
    }
}
```

Output:

Hello John

B)Program:

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">
    <EditText
        android:id="@+id/etName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter your name" />
    <Button
        android:id="@+id/btnOk"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="OK"
        android:layout_marginTop="16dp"/>
    <TextView
        android:id="@+id/tvGreeting"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text=""
        android:textSize="24sp"
        android:paddingTop="20dp"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.helloapp;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
```

```
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        EditText etName = findViewById(R.id.etName);
        Button btnOk = findViewById(R.id.btnOk);
        TextView tvGreeting = findViewById(R.id.tvGreeting);
        btnOk.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String name = etName.getText().toString();
                tvGreeting.setText("Hello " + name);
            }
        });
    }
}
```

Output:

Hello Alice

Experiment-2: Create a screen that has input boxes for User Name, Password, Address, Gender (radio buttons for male and female), Age (numeric), Date of Birth (DatePicker), State (Spinner), and a Submit button. On clicking the submit button, print all the data below the Submit button. Use (a) Linear Layout (b) Relative Layout and (c) Grid Layout or Table Layout.

Program:

A) Linear Layout Version

activity_main.xml

```
<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="match_parent"
   android:layout_height="match_parent">
<LinearLayout
   android:layout_width="match_parent"
   android:layout_height="wrap_content"
   android:orientation="vertical"
   android:padding="16dp">
   <EditText android:id="@+id/etUserName" android:layout_width="match_parent"
      android:layout_height="wrap_content" android:hint="User Name"/>
   <EditText android:id="@+id/etPassword" android:layout_width="match_parent"
      android:layout_height="wrap_content" android:hint="Password"
      android:inputType="textPassword"/>
   <EditText android:id="@+id/etAddress" android:layout_width="match_parent"
      android:layout_height="wrap_content" android:hint="Address" android:inputType="textMultiLine"/>
   <TextView android:text="Gender"/>
   <RadioGroup android:id="@+id/rgGender" android:orientation="horizontal">
      <RadioButton android:id="@+id/rbMale" android:text="Male"/>
      <RadioButton android:id="@+id/rbFemale" android:text="Female"/>
   </RadioGroup>
   <EditText android:id="@+id/etAge" android:layout_width="match_parent"
      android:layout_height="wrap_content" android:hint="Age" android:inputType="number"/>

   <DatePicker android:id="@+id/dpDOB" android:layout_width="wrap_content"
      android:layout_height="wrap_content"/>
   <Spinner android:id="@+id/spinnerState" android:layout_width="match_parent"
      android:layout_height="wrap_content" android:entries="@array/states"/>
   <Button android:id="@+id/btnSubmit" android:layout_width="wrap_content"
      android:layout_height="wrap_content" android:text="Submit" android:layout_marginTop="16dp"/>
```

```
    <TextView android:id="@+id/tvResult" android:layout_width="match_parent"
        android:layout_height="wrap_content" android:text="" android:paddingTop="16dp"/>
</LinearLayout>
</ScrollView>
```

MainActivity.java

Output:

Experiment-3

Program:

Output:

Experiment-4:

Program:

Output:

Experiment-5

Program:

Output:

Experiment-6:

Program:

Output:

Experiment-7:

Program:

Output:

Experiment-8:

Program:

Output:

Experiment-9:

Program:

Output:

Experiment-10:

Program:

Output:

Experiment-11

Program:

Output:

Experiment-12:

Program:

Output: