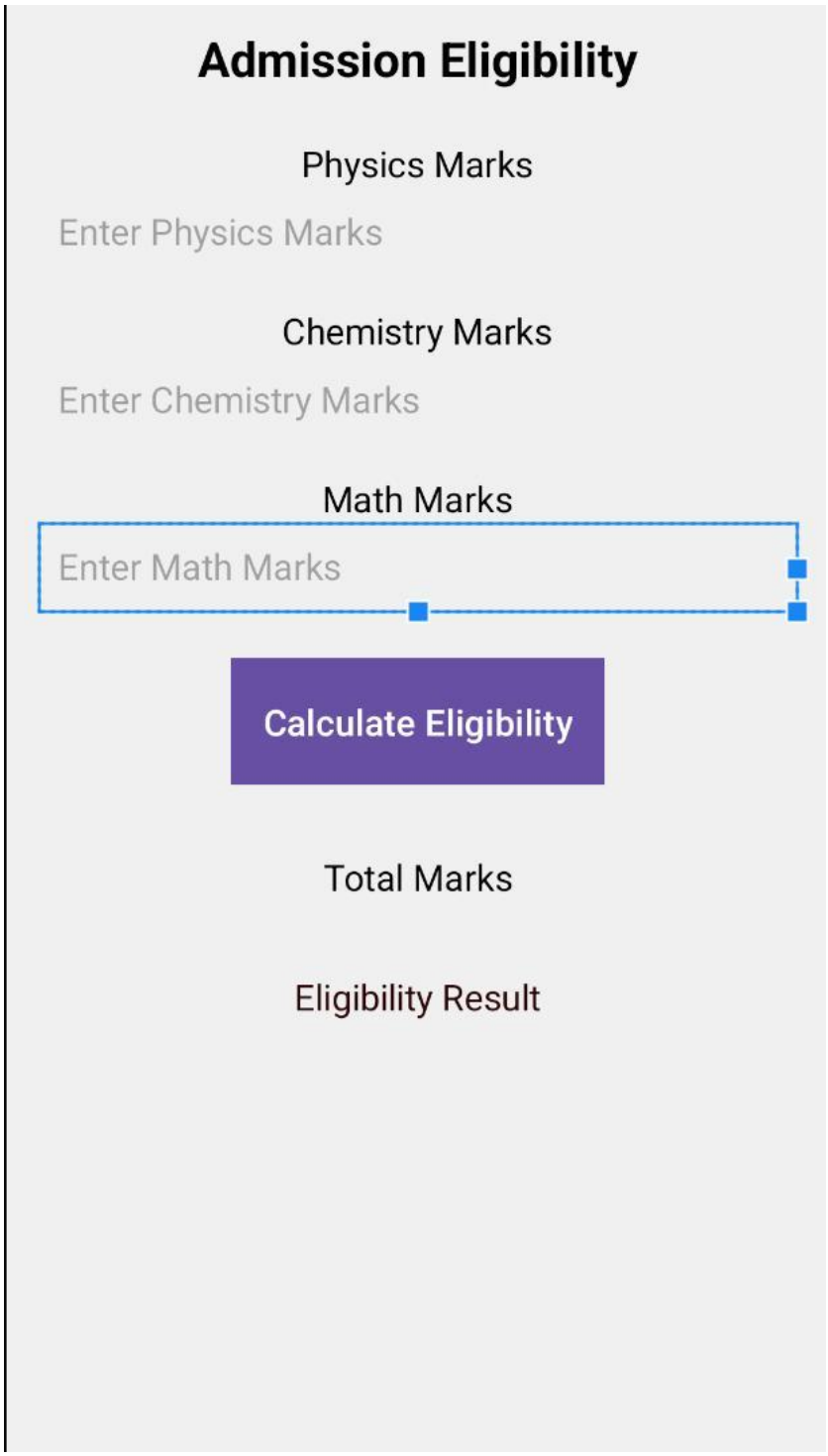
Design an app for vegetables and fruits selling market, which take the following inputs: customer mobile no., and minimum three fruits and vegetables. Toast the total amount to be paid by the customer and customer mobile.(use two or three spinner's)

```
package com.example.fruits;


public class MainActivity extends AppCompatActivity {
    EditText editTextMobile;
    Spinner spinnerFruit1, spinnerVeg1;
    Button buttonCalculate;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        editTextMobile = findViewById(R.id.mobile);
        spinnerFruit1 = findViewById(R.id.fruit);
        spinnerVeg1 = findViewById(R.id.vegetable);
        buttonCalculate = findViewById(R.id.btn);
        String[] fruits = {"Apple - $3", "Banana - $1", "Orange - $2","pineapple -$5","gundu -$20"};
        String[] vegetables = {"Carrot - $2", "Potato - $1", "Tomato - $1.5"};
        ArrayAdapter<String> adapterFruits = new ArrayAdapter<>(this,
android.R.layout.simple_spinner_item, fruits);
        ArrayAdapter<String> adapterVegetables = new ArrayAdapter<>(this,
android.R.layout.simple_spinner_item, vegetables);


        adapterFruits.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);

adapterVegetables.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        spinnerFruit1.setAdapter(adapterFruits);
        spinnerVeg1.setAdapter(adapterVegetables);
```

```
        // Set listeners for spinners
        spinnerFruit1.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
            @Override
            public void onItemSelected(AdapterView<?> adapterView, View view, int position, long id) {
                priceFruit = getFruitPrice(position);
            }
            @Override
            public void onNothingSelected(AdapterView<?> adapterView) {
            }
        }
        spinnerVeg1.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
            @Override
            public void onItemSelected(AdapterView<?> adapterView, View view, int position, long id) {
                priceVeg1 = getVegetablePrice(position);
            }
            @Override
            public void onNothingSelected(AdapterView<?> adapterView) {
            }
        });
        // Calculate button listener
        buttonCalculate.setOnClickListener(view -> {
            String mobileNo = editTextMobile.getText().toString().trim();
            if (mobileNo.isEmpty()) {
                Toast.makeText(MainActivity.this, "Please enter mobile number",
Toast.LENGTH_SHORT).show();
                return;
            }
            // Calculate total amount
            double totalAmount = priceFruit1 + priceVeg1;
            // Display the total amount and mobile number
            String message = "Customer Mobile: " + mobileNo + "\nTotal Amount: $" + totalAmount;
```

```
            Toast.makeText(MainActivity.this, message, Toast.LENGTH_LONG).show();
        });
    }
    // Get fruit price based on position
    private int getFruitPrice(int position) {
        switch (position) {
            case 0:
                return 3;
            case 1:
                return 1;
            case 2:
                return 2;
            default:
                return 0;
        }
    }
    // Get vegetable price based on position
    private int getVegetablePrice(int position) {
        switch (position) {
            case 0:
                return 2;
            case 1:
                return 1;
            case 2:
                return 1;
            default:
                return 0;
        }
    }
}
```

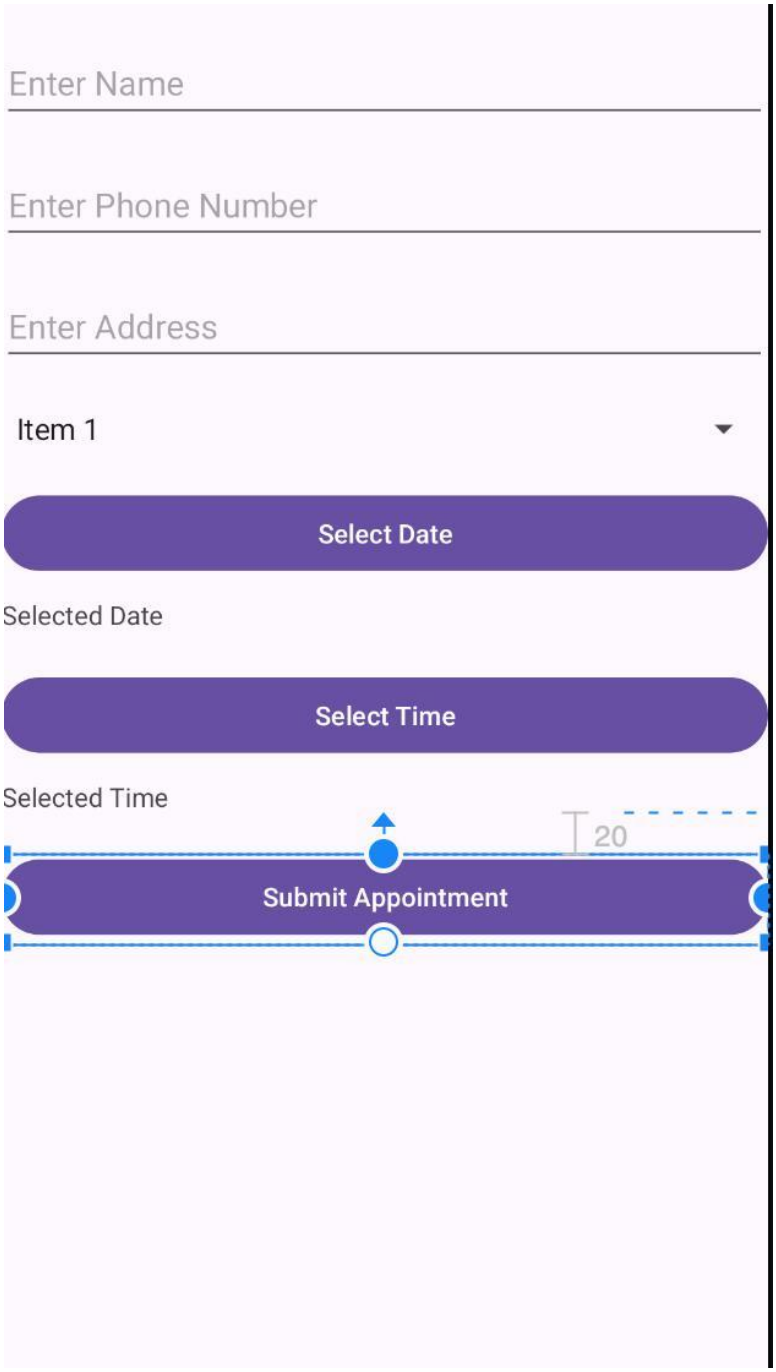
Presidency university admission department need an app for checking student's eligibility for admission, students should enter their Reg No. Name, Board and marks of Physics, Chemistry and Mathematics, if the average of marks is above 60 %, then set the message “you are eligible for admission” in a TextView placed at the bottom of the screen.



```
public class MainActivity extends AppCompatActivity {
    EditText editTextRegNo, editTextName, editTextBoard, editTextPhysics, editTextChemistry,
editTextMath;
    Button buttonCheck;
    TextView textViewResult;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
            // Initialize views
            editTextRegNo = findViewById(R.id.editTextRegNo);
            editTextName = findViewById(R.id.editTextName);
            editTextBoard = findViewById(R.id.editTextBoard);
            editTextPhysics = findViewById(R.id.editTextPhysics);
            editTextChemistry = findViewById(R.id.editTextChemistry);
            editTextMath = findViewById(R.id.editTextMath);
            buttonCheck = findViewById(R.id.buttonCheck);
            textViewResult = findViewById(R.id.textViewResult);

            // Check button listener
            buttonCheck.setOnClickListener(view -> {
                try {
                    // Get the entered marks
                    int physicsMarks = Integer.parseInt(editTextPhysics.getText().toString());
                    int chemistryMarks = Integer.parseInt(editTextChemistry.getText().toString());
                    int mathMarks = Integer.parseInt(editTextMath.getText().toString());
                    // Calculate average
```

```
                double average = (physicsMarks + chemistryMarks + mathMarks) / 3.0;
                // Set result message based on eligibility
                if (average >= 60) {
                    textViewResult.setText("You are eligible for admission");
                } else {
                    textViewResult.setText("You are not eligible for admission");
                }
            } catch (NumberFormatException e) {
                Toast.makeText(MainActivity.this, "Please enter valid marks",
Toast.LENGTH_SHORT).show();
            }
        });
    }
}
```

Design a Salon appointment app. Take inputs from customers like Name, phone number, address, type of services with money (Spinner) and date of appointment and time of appointment. On pressing the submit Button, Customer should view all the details of appointment in the next activity with payment details.



MainActivity

```
public class MainActivity extends AppCompatActivity {
    EditText nameInput, phoneInput, addressInput;
    Spinner serviceSpinner;
```

```
    Button dateButton, timeButton, submitButton;
    String selectedDate, selectedTime;
    String[] services = {"Haircut - $15", "Facial - $30", "Manicure - $20", "Pedicure - $25", "Massage - $50"};


    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);

            // Initialize views
            nameInput = findViewById(R.id.nameInput);
            phoneInput = findViewById(R.id.phoneInput);
            addressInput = findViewById(R.id.addressInput);
            serviceSpinner = findViewById(R.id.serviceSpinner);
            dateButton = findViewById(R.id.dateButton);
            timeButton = findViewById(R.id.timeButton);
            submitButton = findViewById(R.id.submitButton);

            // Set up the service spinner with options
            ArrayAdapter<String> adapter = new ArrayAdapter<>(this, android.R.layout.simple_spinner_dropdown_item, services);
            serviceSpinner.setAdapter(adapter);

            // Date Picker Dialog for selecting appointment date
            dateButton.setOnClickListener(v -> {
                Calendar calendar = Calendar.getInstance();
                new DatePickerDialog(MainActivity.this, (view, year, month, dayOfMonth) -> {
                    selectedDate = dayOfMonth + "/" + (month + 1) + "/" + year;
                    dateButton.setText("Date: " + selectedDate);
```

```
            }, calendar.get(Calendar.YEAR), calendar.get(Calendar.MONTH),
calendar.get(Calendar.DAY_OF_MONTH)).show();
        });

        // Time Picker Dialog for selecting appointment time
        timeButton.setOnClickListener(v -> {
            Calendar calendar = Calendar.getInstance();
            new TimePickerDialog(MainActivity.this, (view, hourOfDay, minute) -> {
                selectedTime = hourOfDay + ":" + minute;
                timeButton.setText("Time: " + selectedTime);
            }, calendar.get(Calendar.HOUR_OF_DAY), calendar.get(Calendar.MINUTE), true).show();
        });

        // Submit button to proceed to the next activity with appointment details
        submitButton.setOnClickListener(v -> {
            // Validate inputs
            if (nameInput.getText().toString().isEmpty() || phoneInput.getText().toString().isEmpty()
|| addressInput.getText().toString().isEmpty() || selectedDate == null || selectedTime == null) {
                Toast.makeText(MainActivity.this, "Please fill in all the details",
Toast.LENGTH_SHORT).show();
            } else {
                // Pass data to the next activity
                Intent intent = new Intent(MainActivity.this, MainActivity2.class);
                intent.putExtra("name", nameInput.getText().toString());
                intent.putExtra("phone", phoneInput.getText().toString());
                intent.putExtra("address", addressInput.getText().toString());
                intent.putExtra("service", serviceSpinner.getSelectedItem().toString());
                intent.putExtra("date", selectedDate);
                intent.putExtra("time", selectedTime);
                startActivity(intent);
            }
        });
```

```
        }
    }
```

MainActivity2

```
public class MainActivity2 extends AppCompatActivity {
  TextView appointmentDetails;

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    EdgeToEdge.enable(this);
    setContentView(R.layout.activity_main2);


        appointmentDetails = findViewById(R.id.appointmentDetails);

        // Get data from Intent
        String name = getIntent().getStringExtra("name");
        String phone = getIntent().getStringExtra("phone");
        String address = getIntent().getStringExtra("address");
        String service = getIntent().getStringExtra("service");
        String date = getIntent().getStringExtra("date");
        String time = getIntent().getStringExtra("time");

        // Extract price from service string
        String price = service.split("-")[1].trim();

        // Display appointment details
        appointmentDetails.setText("Name: " + name + "\nPhone: " + phone + "\nAddress: " +
address +
                "\nService: " + service + "\nDate: " + date + "\nTime: " + time + "\nTotal Payment: " +
price);
```

```
    }
}
```

Design an Android application to calculate the body mass index by reading the input from user. Create two different activities one for reading user data and one for displaying the BMI result using intents. Use action listener for the button to invoke the next activity.

a. The main activity shall have user data like name, height, weight and city name (use spinner auto fill) fields.
b. Upon submission of the user data by clinking on the calculate button the above fields shall be verified for completeness and then forwarded to the next activity.
c. The calculation activity shall calculate the BMI using values of the fields that have been received from the main activity and display appropriate messages.

MainActivity

```
public class MainActivity extends AppCompatActivity {

    private EditText nameInput;
    private EditText weightInput;
    private EditText heightInput;
    private Spinner citySpinner;
    private Button calculateButton;
    private TextView resultTextView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        // Link XML views with Java code
        nameInput = findViewById(R.id.nameInput);         // Input for name
        weightInput = findViewById(R.id.weightInput);     // Input for weight
        heightInput = findViewById(R.id.heightInput);     // Input for height
        citySpinner = findViewById(R.id.citySpinner);     // Spinner for city selection
```

```
        calculateButton = findViewById(R.id.calculateButton); // Button to calculate BMI
        resultTextView = findViewById(R.id.resultTextView);   // Display the result

        // Set up the city spinner with predefined city names
        String[] cities = {"chennai", "bnglr", "delhi", "mumbai", "hyd"};
        ArrayAdapter<String> cityAdapter = new ArrayAdapter<>(this,
android.R.layout.simple_spinner_item, cities);

cityAdapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        citySpinner.setAdapter(cityAdapter);

        // Set OnClickListener for the calculate button
        calculateButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                calculateBMI();
            }
        });
    }

    // Method to calculate BMI
    private void calculateBMI() {
        String name = nameInput.getText().toString();     // Get name input
        String weightStr = weightInput.getText().toString(); // Get weight input
        String heightStr = heightInput.getText().toString(); // Get height input
        String selectedCity = citySpinner.getSelectedItem().toString(); // Get selected city

        if (!weightStr.isEmpty() && !heightStr.isEmpty() && !name.isEmpty()) {
            try {
                // Convert inputs to float
                float weight = Float.parseFloat(weightStr);  // in kg
                float heightCm = Float.parseFloat(heightStr); // in cm

                // Convert height to meters and calculate BMI
                float heightM = heightCm / 100;
                float bmi = weight / (heightM * heightM);  // BMI formula

                // Display the result based on BMI categories and the selected city
                String message = "Hello " + name + " from " + selectedCity + ", your BMI is: " + bmi;
                if (bmi < 18.5) {
                    resultTextView.setText(message + "\nYou are Under Weight");
                } else if (bmi >= 18.5 && bmi < 24.9) {
                    resultTextView.setText(message + "\nYou are Healthy");
                } else if (bmi >= 24.9 && bmi < 30) {
                    resultTextView.setText(message + "\nYou are Over Weight");
                } else if (bmi >= 30) {
                    resultTextView.setText(message + "\nYou are Suffering from Obesity");
                }
```

```
        } catch (NumberFormatException e) {
            Toast.makeText(this, "Invalid input!", Toast.LENGTH_SHORT).show();
        }
    } else {
        Toast.makeText(this, "Please enter your name, weight, height, and select a city",
Toast.LENGTH_SHORT).show();
    }
  }
}
```

Design an Android application to facilitate signup and login activities. Create two different activities one for signing up and one for logging using intents in by displaying appropriate messages. Use action listener for the button to invoke the next activity.

a. The signup activity shall have user-name, password, confirm password and date of sign in (use date picker) fields.
b. The password and confirm password filed shall be verified for match before invoking the next activity with appropriate informational messages.
c. The login activity shall validate both the user-name and password fields that have been received from sign-up activity and re-entered in the login activity for the match and display appropriate messages.

MainActivity

```
public class MainActivity extends AppCompatActivity {

  EditText editTextUsername, editTextPassword, editTextConfirmPassword;
  DatePicker datePicker;
  Button buttonSignup;

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_signup);
```

```
        // Initialize views
        editTextUsername = findViewById(R.id.editTextUsername);
        editTextPassword = findViewById(R.id.editTextPassword);
        editTextConfirmPassword = findViewById(R.id.editTextConfirmPassword);
        datePicker = findViewById(R.id.datePicker);
        buttonSignup = findViewById(R.id.buttonSignup);

        // Button listener to handle signup
        buttonSignup.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String username = editTextUsername.getText().toString().trim();
                String password = editTextPassword.getText().toString().trim();
                String confirmPassword = editTextConfirmPassword.getText().toString().trim();

                // Get the date from DatePicker
                int day = datePicker.getDayOfMonth();
                int month = datePicker.getMonth() + 1;
                int year = datePicker.getYear();
                String signUpDate = day + "/" + month + "/" + year;

                // Validate password match

                if (!password.equals(confirmPassword)) {
                    Toast.makeText(MainActivity.this, "Passwords do not match!",
Toast.LENGTH_SHORT).show();
                    return;
                }

                // Pass data to LoginActivity using Intent
                Intent intent = new Intent(MainActivity.this, LoginActivity.class);
                intent.putExtra("username", username);
                intent.putExtra("password", password);
                intent.putExtra("signUpDate", signUpDate);
                startActivity(intent);
            }
        });
    }
}
```

MainActivity2

```
public class LoginActivity extends AppCompatActivity {

    EditText editTextUsername, editTextPassword;
    Button buttonLogin;
```

```
    String receivedUsername, receivedPassword;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_login);
        // Initialize views
        editTextUsername = findViewById(R.id.editTextLoginUsername);
        editTextPassword = findViewById(R.id.editTextLoginPassword);
        buttonLogin = findViewById(R.id.buttonLogin);
        // Get data from SignupActivity
        Intent intent = getIntent();
        receivedUsername = intent.getStringExtra("username");
        receivedPassword = intent.getStringExtra("password");

        // Button listener to handle login
        buttonLogin.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String enteredUsername = editTextUsername.getText().toString().trim();
                String enteredPassword = editTextPassword.getText().toString().trim();

                // Validate username and password
                if (enteredUsername.equals(receivedUsername) &&
enteredPassword.equals(receivedPassword)) {
                    Toast.makeText(LoginActivity.this, "Login Successful!",
Toast.LENGTH_SHORT).show();
                } else {
                    Toast.makeText(LoginActivity.this, "Invalid username or password!",
Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
```