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PRACTICAL – 03

Aim :- 1. Find the factorial of the given input number.

2. Check whether number is even or odd.

3. Check whether the number is prime or not.

4. Write a program to check leap year.

Code :- package

com.example.practical3a;

```
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle; import
android.view.View; import
android.widget.Button; import
android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
  EditText t1;
  Button b1,b2,b3,b4;
  TextView t2;
@Override
  protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);       t1 =
(EditText)findViewById(R.id.t1);       b1 =
(Button)findViewById(R.id.b1);       b2 =
(Button)findViewById(R.id.b2);       b3 =
(Button)findViewById(R.id.b3);       b4 =
(Button)findViewById(R.id.b4);
      t2 = (TextView)findViewById(R.id.t2);
```

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```
    b1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            int i;
int fact =1;
            int n = Integer.parseInt(t1.getText().toString());
for(i=1;i<=n;i++){                fact = fact*i;
            }
            t2.setText("Factorial=" +fact);
        }
    });
   b2.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {            int n =
Integer.parseInt(t1.getText().toString());            if(n
%2 ==0){
              t2.setText("Even Number");
           }
           else {
              t2.setText("Odd Number");
           }
       }
   });
  b3.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View view) {            int n =
Integer.parseInt(t1.getText().toString());
boolean flag = false;           for (int i = 2; i <= n / 2;
++i) {              // condition for nonprime number
              if (n % i == 0) {
flag = true;                  break;
              }
}
          if(!flag){
              t2.setText("Prime Number");
          }
          else{
              t2.setText(" Not a Prime Number");
```

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```
        }
    }
  });
  b4.setOnClickListener(new View.OnClickListener() {
@Override
    public void onClick(View view) {
        int year = Integer.parseInt(t1.getText().toString());
boolean leap=false;          if(year%4==0){
if(year%100==0){                if (year % 400 == 0)
leap = true;                 else
                leap = false;
            }
else                leap =
true;
        }          else
leap = false;
if(leap){
            t2.setText(year+" is a leap year ");
        }
else{
            t2.setText(year+" is not a leap year ");
        }
    }
  });
  }
}
```

Output :

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