ROGRAM 1

```
void main()
{
  String a="Arpitha ";
  String b="C";
  bool val=(a==b);

  print("$val");
}
```

RESULT:false

PROGRAM 2

```
void main()
{
  List numbers=[1,2,3,4,5];
  print("Numbers=$numbers");
  print("First number is ${numbers[0]}");
  print("Second number is ${numbers[1]}");
  print("Third number is ${numbers[2]}");
  print("Fourth number is ${numbers[3]}");
  print("Fifth number is ${numbers[4]}");

}
```

RESULT:
Numbers=[1, 2, 3, 4, 5]
First number is 1
Second number is 2
Third number is 3
Fourth number is 4
Fifth number is 5

PROGRAM 3

```
void main()
{
  Map<String, String> capitals = {'USA': 'Washington, D.C.', 'France': 'Paris', 'Japan':
'Tokyo',};
  print("Country-Capital Map: $capitals");
  print("Capital of USA: ${capitals['USA']}");
  capitals['Germany']= 'Berlin';
  print("After adding Germany: $capitals");

  print("Country-Capital Paris:");
  for(var country in capitals.keys) {
```

```
    var capital = capitals[country];
    print("The capital of $country is $capital");

  }
  capitals.remove('France');
  print('After removing France: $capitals');
  bool hasJapan = capitals.containsKey('Japan');
  print('Does the maphave the country Japan? $hasJapan');
}
```

RESULT:
Country-Capital Map: {USA: Washington, D.C., France: Paris, Japan: Tokyo}
Capital of USA: Washington, D.C.
After adding Germany: {USA: Washington, D.C., France: Paris, Japan: Tokyo, Germany: Berlin}
Country-Capital Paris:
The capital of USA is Washington, D.C.
The capital of France is Paris
The capital of Japan is Tokyo
The capital of Germany is Berlin
After removing France: {USA: Washington, D.C., Japan: Tokyo, Germany: Berlin}
Does the maphave the country Japan? true

PROGRAM 4

```
void main()
{
  int a=5,b=10;
  String op='+';

  if(op=='+')
  {
    print('Sum=${a+b}');

  }
  else if(op=='-')
  {
    print('Substraction=${a-b}');
  }
  else if(op=='*')
  {
    print('Multiplication=${a*b}');
  }

   else if(op=='/')
  {
    print('Division=${a/b}');
```

```
  }
}
```

RESULT:
Sum=15

PROGRAM 5

```
void main()
{
  for (int i=0;i<5;i++)
  {
    if(i==3)
    {
      continue;
    }
    print("Iteration $i");
  }
}
```

RESULT:
Iteration 0
Iteration 1
Iteration 2
Iteration 4

PROGRAM 6

```
void main()
{
  int i;
  print("Rollno.s");
  for (int i=0;i<15;i++)
  {
    if(i==10)

      break;

    print('$i');
}
}
```

RESULT:
Rollno.s
0
1
2
3

4
5
6
7
8
9

PROGRAM 7

```
void calculateInterest(double principal,double rate,double time){
   double interest=principal*rate*time/100;
  print("Simple interest is $interest");
}
void main(){
 double principal=5000;
  double time=3;
  double rate=3;
  calculateInterest(principal,time,rate);

}
```

OUTPUT:
Simple interest is 450

PROGRAM 8

```
class Rectangle {
  double? length;
  double? breadth;

  double area() {
    return length! * breadth!;
  }
}

void main() {
  Rectangle rectangle = Rectangle();
  rectangle.length = 10;
  rectangle.breadth = 5;
  print("Area of the rectangle is ${rectangle.area()}");
}
```

OUTPUT:
Area of the rectangle is 50.0

PROGRAM 9-h/w

```
import 'dart:math';
```

```
String generateRandomPassword(int length) {
  const String upper = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ';
  const String lower = 'abcdefghijklmnopqrstuvwxyz';
  const String numbers = '0123456789';
  const String special = '!@#\$%^&*()_-+=<>?';

  const String allChars = upper + lower + numbers + special;

  final Random rand = Random.secure();

  return List.generate(length, (index) => allChars[rand.nextInt(allChars.length)])
      .join();
}

void main() {
  String password = generateRandomPassword(12); // you can change the length
  print('Generated Password: $password');
}
```

OUTPUT
Generated Password: pStaJGeeIRaq

PROGRAM 10-H/W

```
class Book {
  // Attributes
  String name;
  String author;
  double price;

  // Constructor
  Book(this.name, this.author, this.price);

  // Method to display book details
  void display() {
    print('Book Name: $name');
    print('Author: $author');
    print('Price: ₹$price');
  }
}

void main() {
  // Creating a book object
  Book myBook = Book('Wings of Fire', 'A.P.J. Abdul Kalam', 299.0);

  // Displaying book details
  myBook.display();
```

```
}
```

OUTPUT
Book Name: Wings of Fire
Author: A.P.J. Abdul Kalam
Price: ₹299.0

PROGRAM 11

```
import 'dart:math';

String generateRandomPassword(int length) {
  const String upper = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ';
  const String lower = 'abcdefghijklmnopqrstuvwxyz';
  const String numbers = '0123456789';
  const String special = '!@#\$%^&*()_-+=<>?';

  const String allChars = upper + lower + numbers + special;

  final Random rand = Random.secure();

  return List.generate(length, (index) => allChars[rand.nextInt(allChars.length)])
      .join();
}

void main() {
  String password = generateRandomPassword(12); // you can change the length
  print('Generated Password: $password');
}
```

OUTPUT
0x(8WblS*t%c

PROGRAM 12

```
void calculateInterest(double principal, double rate, double time) {
  double interest = principal * rate * time / 100;
  print("Simple interest is $interest");
}

void main() {
  double principal = 5000;
  double time = 3;
  double rate = 3;
  calculateInterest(principal, time, rate);
}
```

OUTPUT

Simple interest is 450.0

PROGRAM 13.

```
class Rectangle {
  double? length;
  double? breadth;

  double area() {
    return length! * breadth!;
  }
}

void main() {
  Rectangle rectangle = Rectangle();
  rectangle.length = 10;
  rectangle.breadth = 5;
  print('Area of the rectangle = ${rectangle.area()}');
}
```

OUTPUT

Area of the rectangle = 50.0