Program 2:data types

```
public class datatypes {

   public static void main(String[] args) {

      byte mybyte1, mybyte2;

      mybyte1 = 120;

      mybyte2 = 50;

      System.out.println("byte 1: " + mybyte1);

      System.out.println("byte 2: " + mybyte2);

      mybyte1++;

      System.out.println("byte 1 incremental: " + mybyte1);


      short sort1 = 6000;

      System.out.println("short 1: " + sort1);


      int m1, m2, res;

      m1 = 1000;

      m2 = 2000;

      res = m1 + m2;

      System.out.println("int 1: " + m1);

      System.out.println("int 2: " + m2);

      System.out.println("int 1 + int 2: " + res);


      long l1, l2, res1;

      l1 = 1400L;

      l2 = 2200L;

      res1 = l1 + l2;

      System.out.println("long 1: " + l1);

      System.out.println("long 2: " + l2);

      System.out.println("long 1 + long 2: " + res1);


      float f1, f2, res2;

      f1 = 1.60f;

      f2 = 2.50f;

      res2 = f1 + f2;

      System.out.println("float 1: " + f1);

      System.out.println("float 2: " + f2);

      System.out.println("float 1 + float 2: " + res2);
```

```
        double d1, d2, res3;
        d1 = 100.463d;
        d2 = 200.474d;
        res3 = d1 + d2;
        System.out.println("double 1: " + d1);
        System.out.println("double 2: " + d2);
        System.out.println("double 1 + double 2: " + res3);

        boolean mybool = true;
        if (mybool == true)
            System.out.println("Boolean value");

        char mychar1 = 'A';
        char mychar2 = 10;
        System.out.println("mychar1: " + mychar1);
        System.out.println("mychar2: " + mychar2);
        mychar1++;
        System.out.println("mychar1 incremental: " + mychar1);

        String s1 = "skill test 1";
        System.out.println("string: " + s1);
    }
}
```

Program 3 : student.java

```
public class student {
    String name;
    int regno;

    student() {
        name = "dhanush";
        regno = 1234;
    }

    student(String n, int r) {
        name = n;
```

```
        regno = r;
    }

    student(student s) {
        name = s.name;
        regno = s.regno;
    }

    void display() {
        System.out.println(name + "\n" + regno);
    }

    public static void main(String[] args) {
        student s1 = new student();
        student s2 = new student("dhanu", 123);
        student s3 = new student(s1);
        s1.display();
        s2.display();
        s3.display();
    }
}
```

Program 4 : Conversion

```
public class conversion {
    public static void main(String[] args) {
        byte b = 10;
        short s = 12;
        int in = 14;
        long l = 20L;
        float f = 0.56f;
        double d = 0.55;
        char c = 'h';
        boolean bool = true;

        // Autoboxing
        Byte byteobj = b;
        Short shortobj = s;
        Integer intobj = in;
```

```
        Long longobj = l;
        Float floatobj = f;
        Double doubleobj = d;
        Character charobj = c;
        Boolean booleanobj = bool;

        System.out.println("Autoboxing byteobj: " + byteobj);
        System.out.println("Autoboxing shortobj: " + shortobj);
        System.out.println("Autoboxing intobj: " + intobj);
        System.out.println("Autoboxing longobj: " + longobj);
        System.out.println("Autoboxing floatobj: " + floatobj);
        System.out.println("Autoboxing doubleobj: " + doubleobj);
        System.out.println("Autoboxing charobj: " + charobj);
        System.out.println("Autoboxing booleanobj: " + booleanobj);

        // Unboxing
        byte bytevalue = byteobj;
        short shortvalue = shortobj;
        int intvalue = intobj;
        long longvalue = longobj;
        float floatvalue = floatobj;
        double doublevalue = doubleobj;
        char charvalue = charobj;
        boolean booleanvalue = booleanobj;

        System.out.println("Unboxing bytevalue: " + bytevalue);
        System.out.println("Unboxing shortvalue: " + shortvalue);
        System.out.println("Unboxing intvalue: " + intvalue);
        System.out.println("Unboxing longvalue: " + longvalue);
        System.out.println("Unboxing floatvalue: " + floatvalue);
        System.out.println("Unboxing doublevalue: " + doublevalue);
        System.out.println("Unboxing charvalue: " + charvalue);
        System.out.println("Unboxing booleanvalue: " + booleanvalue);
    }
}
```

Program : 8 Oddeven

```
import java.util.Scanner;


public class oddeven {
   public static void main(String[] args) {
      int n;
      Scanner s = new Scanner(System.in);
      System.out.println("Enter number to find even or odd:");
      n = s.nextInt();
      if (n % 2 == 0) {
         System.out.println("Even");
      } else {
         System.out.println("Odd");
      }
      s.close();
   }
}
```

Program 8: switchd

```
public class switchd {
   public static void main(String[] args) {
      int day = 3;
      switch (day) {
         case 1:
            System.out.println("Monday");
            break;
         case 2:
            System.out.println("Tuesday");
            break;
         case 3:
            System.out.println("Wednesday");
            break;
         case 4:
            System.out.println("Thursday");
            break;
         case 5:
            System.out.println("Friday");
```

```
            break;
        case 6:
            System.out.println("Saturday");
            break;
        default:
            System.out.println("Invalid day");
      }
   }
}
```

Program 8 : fib

```
import java.util.Scanner;

public class fib {
   public static void main(String[] args) {
      int n, a = 0, b = 0, c = 1;
      Scanner s = new Scanner(System.in);
      System.out.println("Enter number for Fibonacci series length:");
      n = s.nextInt();
      System.out.println("Fibonacci series:");
      for (int i = 0; i < n; i++) {
         a = b;
         b = c;
         c = a + b;
         System.out.print(a + " ");
      }
      s.close();
   }
}
```

Program 8: palindrome

```
import java.util.Scanner;

public class palindrome {
```

```
    public static void main(String[] args) {
        int n, m, a = 0, x;
        Scanner s = new Scanner(System.in);
        System.out.println("Enter number to reverse:");
        n = s.nextInt();
        m = n;
        while (n > 0) {
            x = n % 10;
            a = a * 10 + x;
            n = n / 10;
        }
        if (a == m) {
            System.out.println("Given number " + m + " is a palindrome.");
        } else {
            System.out.println("Given number " + m + " is not a palindrome.");
        }
        s.close();
    }
}
```

Program 8 : Reverse java

```
import java.util.Scanner;

public class reverse {
    public static void main(String[] args) {
        int n, m = 0, a, sum = 0;
        Scanner s = new Scanner(System.in);
        System.out.println("Enter number to reverse:");
        n = s.nextInt();
        int original = n;
        while (n > 0) {
            a = n % 10;
            m = m * 10 + a;
            sum += a;
            n = n / 10;
        }
        System.out.println("Reverse: " + m);
```

```
        System.out.println("Sum of digits: " + sum);
        s.close();
    }
}
```

Program 8: prime.java

```
import java.util.Scanner;

public class prime {
    public static void main(String[] args) {
        int j, x, flag = 1;
        Scanner s = new Scanner(System.in);
        System.out.println("Enter number to check prime:");
        x = s.nextInt();
        for (j = 2; j <= x / 2; j++) {
            if (x % j == 0) {
                flag = 0;
                break;
            }
        }
        if (flag == 1) {
            System.out.println(x + " is a prime number.");
        } else {
            System.out.println(x + " is not a prime number.");
        }
        s.close();
    }
}
```

Program 10: calculator

```
import java.util.Scanner;

public class Calculator {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        double n1, n2, res = 0;
```

```
        char op;
        System.out.println("Enter two numbers:");
        n1 = s.nextDouble();
        n2 = s.nextDouble();
        System.out.println("Enter operator (+, -, *, /):");
        op = s.next().charAt(0);
        switch (op) {
            case '+':
                res = n1 + n2;
                break;
            case '-':
                res = n1 - n2;
                break;
            case '*':
                res = n1 * n2;
                break;
            case '/':
                if (n2 != 0) {
                    res = n1 / n2;
                } else {
                    System.out.println("Error: Division by zero!");
                    return;
                }
                break;
            default:
                System.out.println("Error: Invalid operator!");
                return;
        }
        System.out.println(n1 + " " + op + " " + n2 + " = " + res);
        s.close();
    }
}
```

Program 11 two program : arrays and multi arrays

```
public class arrays {
    public static void main(String[] args) {
        int[] a = new int[5];
        a[0] = 10;
```

```
        a[1] = 20;
        a[2] = 30;
        a[3] = 40;
        a[4] = 50;

        System.out.println("Elements of array:");
        for (int i = 0; i < a.length; i++) {
            System.out.println(a[i]);
        }

        int[][] multiArr = {{1, 2, 3}, {5, 6, 7}, {9, 11, 10}};
        System.out.println("Elements of 2D array:");
        for (int i = 0; i < multiArr.length; i++) {
            for (int j = 0; j < multiArr[i].length; j++) {
                System.out.print(multiArr[i][j] + " ");
            }
            System.out.println();
        }
    }
}
```