JAVA PROGRAMMING – 1ST DAY

SAHAN DISSANAYAKA

SYNTAX, WHITESPACE AND MAIN METHOD

PROGRAM 01

```
class Example{
	public static void main(String args[]){
		System.out.println("Hello Java");
	}
}
```

PROGRAM 02

```
class Example{
	public static void main(String args[]){
		System.out.println("Hello Java");
		System.out.println("Hello Java");
		System.out.println("Hello Java");
		System.out.println("Hello Java");
		System.out.println("Hello Java");
	}
}
```

PROGRAM 03

```
class Example{
	public static void main(String args[]){
		System.out.println("Elon Musk,");
		System.out.println("No:01,");
		System.out.println("Billionaire Road,");
		System.out.println("Kottawa.");
	}
}
```

MAIN METHOD - ILLEGAL

PROGRAM 04

```
class Example{
	public static main(String args[]){
		System.out.println("Hello");
	}
}
```

PROGRAM 05

```
class Example{
	public static void (String args[]){
		System.out.println("Hello");
	}
}
```

PROGRAM 06

```
class Example{
	public static void main(string args[]){
		System.out.println("Hello");
	}
}
```

PROGRAM 07

```
class Example{
	public void static main(String []args){
		System.out.println("Hello");
	}
}
```

LEGAL, RUNTIME ERROR - INVALID

PROGRAM 08

```
class Example{
	public static void main(String args){
		System.out.println("Hello");
	}
}
```

PROGRAM 09

```
class Example{
	public static void Danapala(String args[]){
		System.out.println("Hello");
	}
}
```

PROGRAM 10

```
class Example{
	public void main(String args[]){
		System.out.println("Hello");
	}
}
```

PROGRAM 11

```
class Example{
	static void main(String args[]){
		System.out.println("Hello");
	}
}
```

LEGAL, NO RUNTIME ERROR - VALID

PROGRAM 12

```
class Example{
	public static void main(String danapala[]){
		System.out.println("Hello");
	}
}
```

PROGRAM 13

```
class Example{
	public static void main(String []args){
		System.out.println("Hello");
	}
}
```

PROGRAM 14

```
class Example{
	static public void main(String []args){
		System.out.println("Hello");
	}
}
```

PROGRAM 15

```
class Example{
	public static void main(String ... args){
		System.out.println("Hello");
	}
}
```

PROGRAM 16

```
interface Example{
	public static void main(String args[]){
		System.out.println("Hello");
	}
}
```

SYSTEM.OUT.PRINTLN(DATA) VS SYSTEM.OUT.PRINT(DATA)

PROGRAM 17

```
class Example{
	public static void main(String args[]){
		System.out.println("A");
		System.out.print("B");
		System.out.print("C");
		System.out.println("D");
		System.out.print("E");
	}
}
```

PROGRAM 18

```
class Example{
	public static void main(String args[]){
		System.out.print("A");
		System.out.print("B");
		System.out.println("C");
		System.out.print("D");
		System.out.print("E");
		System.out.println("F");
	}
}
```

SYSTEM.OUT.PRINTF(DATA)

PROGRAM 19

```
class Example{
	public static void main(String args[]){
		System.out.printf("A");
	}
}
```

PROGRAM 20

```
class Example{
	public static void main(String args[]){
		System.out.printf("A");
		System.out.printf("B");
		System.out.printf("C");
		System.out.printf("D");
	}
}
```

PROGRAM 21

```
class Example{
	public static void main(String args[]){
		System.out.printf("A\n");
		System.out.printf("B\n");
		System.out.printf("C\n");
		System.out.printf("D\n");
	}
}
```

PROGRAM 22

```
class Example{
	public static void main(String args[]){
		System.out.printf(1000); //Illegal
		System.out.printf(12.23); //Illegal
		System.out.printf('A'); //Illegal
	}
}
```

PROGRAM 23

```
class Example{
	public static void main(String args[]){
		System.out.printf("%d",1000);
		System.out.printf("%f",12.23);
		System.out.printf("%c",'A');
		System.out.printf("%s","Sahan");
	}
}
```

PROGRAM 24

```
class Example{
	public static void main(String args[]){
		System.out.printf("%d\n",1000);
		System.out.printf("%f\n",12.23);
		System.out.printf("%c\n",'A');
		System.out.printf("%s\n","Sahan");
	}
}
```

PROGRAM 25

```
class Example{
	public static void main(String args[]){
		System.out.println(0.00000000001212);
		System.out.println(1221312125434344.343);
		System.out.printf("%.15f",0.00000000001212);
```

```
	}
}
```

JAVA COMMENTS

LINE COMMENTS

PROGRAM 26

```
class Example{
	public static void main(String[] args){
		System.out.println("A");
		//System.out.println("B");
		System.out.println("C");
		//System.out.println("D");
		System.out.println("E");
	}
}
```

BLOCK COMMENTS

PROGRAM 27

```
class Example{
	public static void main(String[] args){
		System.out.println("A");
		/*System.out.println("B");
		System.out.println("C");
		System.out.println("D");
		*/
		System.out.println("E");
	}
}
```

PROGRAM 28

```
class Example{
	public static void main(String[] args){
		System.out.println(100);	//Integer Literals
		System.out.println(1.2323);	//Floating point literals

	}
}
```

PROGRAM 29

```
class Example{
	public static void main(String[] args){
		System.out.println('AB');
		System.out.println(1.2.323);
```

```
	}
}
```

PROGRAM 30

```
class Example{
	public static void main(String args[]){
		System.out.println(100); //This is an integer literal
		System.out.println(1.00223); //floating point literal
		System.out.println(true);	//Boolean literal
		System.out.println("D");	//String literals
	}
}
```

KEYWORDS

abstract	enum	long	super
break	extends	native	switch
byte	final	new	synchronized
case	finally	null	this
catch	float	package	throw
char	for	private	throws
class	if	protected	transient
continue	implements	public	try
default	import	return	void
do	instanceof	short	volatile
double	int	static	while
else	interface	strictfp	

LITERALS (SIMPLE DATA) IN JAVA

PROGRAM 31

```
class Example{
	public static void main(String args[]){
		System.out.println(100); //prints 100 ->DEC
		System.out.println(0144); //prints 100->OCt
		System.out.println(0X64); //prints 100->Hex
		System.out.println(0B1100100); //prints 100 ==>Binary
	}
}
```

PROGRAM 32

```
class Example{
	public static void main(String args[]){
		int x;
		x=100;
		System.out.println(x);
		x=0b1100100;
```

```
                System.out.println(x);
                x=0144;
                System.out.println(x);
                x=0x64;
                System.out.println(x);

        }
}
```

PROGRAM 33

```
class Example{
        public static void main(String args[]){
                System.out.println(26); //dec
                System.out.println(0x110); //Hex
                System.out.println(0x1A); //Hex
        }
}
```

PROGRAM 34

```
class Example{
        public static void main(String args[]){
                int x;
                x=0149; //Illegal ?
                System.out.println(x);

                x=0b121010;     //Illegal ?
                System.out.println(x);
        }
}
```

PROGRAM 35

```
class Example{
        public static void main(String args[]){
                int x;
                x=0abs; //Illegal
                System.out.println(x);

                x=0x10abfg; //Illegal
                System.out.println(x);
        }
}
```

PROGRAM 36

```
class Example{
        public static void main(String args[]){
                int x;
                x=2016_11_08;
                System.out.println(x);

                x=0b11_00_1_00;
                System.out.println(x);
        }
```

```
}
```

INTEGER LITERALS

PROGRAM 37

```
class Example{
      public static void main(String[] args){
            System.out.println(100);
            System.out.println(1233);
            System.out.println(-100);
            System.out.println(121312);
      }
}
```

FLOATING-POINT LITERALS

PROGRAM 38

```
class Example{
      public static void main(String[] args){
            System.out.println(1.3243);
            System.out.println(-1.3243);
            System.out.println(0.00000123);
            System.out.println(1.23E5);
            System.out.println(1.23E-5);
      }
}
```

PROGRAM 39

```
class Example{
        public static void main(String args[]){
                System.out.println(1213.12122);
                System.out.println(0.00000122);
                System.out.println(1.22E-6);
                System.out.println(-0.00000122);
                System.out.println(1.22E6);
                System.out.println(-1.22E-6);
        }
}
```

CHARACTER LITERALS

PROGRAM 40

```
class Example{
      public static void main(String[] args){
            System.out.println('A');
            System.out.println('B');
            System.out.println('0');
            System.out.println('7');
      }
}
```

PROGRAM 41

```
class Example{
        public static void main(String args[]){
                System.out.println('A');
                System.out.println('2');
                System.out.println(5+5);
                System.out.println('5'+5);
                System.out.println('5'+'5');
                System.out.println("5"+5);
                System.out.println("5"+'5');
        }
```

```
}
```

PROGRAM 42

```
class Example{
        public static void main(String args[]){
                System.out.println('A');
                char ch='A';
                System.out.println(ch);
        }
}
```

BOOLEAN LITERALS

PROGRAM 43

```
class Example{
      public static void main(String[] args){
            System.out.println(true);
            System.out.println(false);
      }
}
```

PROGRAM 44

```
class Example{
        public static void main(String args[]){
                System.out.println(true);
                System.out.println(false);
                boolean b;
                b=10>0;
                System.out.println(b);//true

                b=false;
                System.out.println(b);//false
                System.out.println(True); //Illegal
                System.out.println(falSe); //Illegal

        }
}
```

STRING LITERALS

PROGRAM 45

```
class Example{
      public static void main(String[] args){
            System.out.println("Sahan");
            System.out.println("B");
            System.out.println("7");
      }
}
```

PRIMITIVE DATA TYPES IN JAVA

PROGRAM 46

```
class Example{
        public static void main(String args[]){
                int x;
                x=1.5;
                System.out.println(x);
        }
}
```

BYTE

PROGRAM 47

```
import java.util.*;
class Example{
        public static void main(String args[]){
                byte b;
                b=100;
                System.out.println(b);

                b=-123;
                System.out.println(b);

                b=127; //Max of byte
                System.out.println("Max : "+b);

                b=-128;
                System.out.println("Min : "+b);
        }
}
```

PROGRAM 48

```
import java.util.*;
class Example{
        public static void main(String args[]){
                byte b;
                b=127; //max of byte
                System.out.println("Max of byte : "+b);

                b=128; //Compile Error

                b=-128; //min of byte
                System.out.println("Min of byte : "+b);

                b=-129; //Compile Error
        }
}
```

PROGRAM 49

```
class Example{
        public static void main(String args[]){
                byte b;
                b=Byte.MAX_VALUE;
                System.out.println("Max of byte : "+b);

                b=Byte.MIN_VALUE;
                System.out.println("Min of byte : "+b);

        }
}
```

SHORT

PROGRAM 50

```
import java.util.*;
class Example{
        public static void main(String args[]){
                short s;
                s=32767; //Max of short
                System.out.println("Max of short : "+s);

                s=32768; //Error

                s=-32768; //min of short
                System.out.println("Min of short : "+s);

                s=-32769; //Compile Error
        }
}
```

PROGRAM 51

```
class Example{
        public static void main(String args[]){
                short s;
                s=Short.MAX_VALUE;
                System.out.println("Max of short : "+s);

                s=Short.MIN_VALUE;
                System.out.println("Min of short : "+s);
        }
}
```

INT

PROGRAM 52

```
class Example{
        public static void main(String args[]){
                int x;
                x=Integer.MAX_VALUE;
```

```
                System.out.println("Max of int : "+x);

                x=Integer.MIN_VALUE;
                System.out.println("Min of int : "+x);
        }
}
```

LONG

PROGRAM 53

```
class Example{
        public static void main(String args[]){
                long y;
                y=Long.MAX_VALUE;
                System.out.println("Max of long : "+y);

                y=Long.MIN_VALUE;
                System.out.println("Min of long : "+y);
        }
}
```

FLOAT

PROGRAM 54

```
import java.util.*;
class Example{
        public static void main(String args[]){
                float f; //32bits
                f=100;
                System.out.println("f : "+f); //100

                //f=1.5; //Illegal
                f=1.5f; //Legal
                System.out.println("f : "+f); //1.5

        }
}
```

MAX, MIN OF FLOAT

PROGRAM 55

```
import java.util.*;
class Example{
        public static void main(String args[]){
                float f;
                f=Float.MAX_VALUE;
                System.out.println("max of float : "+f); //

                f=Float.MIN_VALUE;
                System.out.println("min of float : "+f); //
        }
}
```

TYPE DOUBLE

PROGRAM 56

```
import java.util.*;
class Example{
        public static void main(String args[]){
                double d;
                d=1.2333;
                System.out.println("double d : "+d);

                d=-0.000122;
                System.out.println("double d : "+d);

        }
}
```

MAX, MIN OF DOUBLE

PROGRAM 57

```
import java.util.*;
class Example{
        public static void main(String args[]){
                double d;
                d=Double.MAX_VALUE;
                System.out.println("max of double : "+d); //

                d=Double.MIN_VALUE;
                System.out.println("min of double : "+d); //
        }
}
```

FLOAT VS DOUBLE

PROGRAM 58

```
class Example{
        public static void main(String args[]){
                double d;
                float f;

                f=0.123456789123456789f;
                d=0.123456789123456789 ; //d or D

                System.out.println("float  : "+f);
                System.out.println("double : "+d);

                f=100.123456789123456789f;
                d=100.123456789123456789 ; //d or D

                System.out.println("float  : "+f);
                System.out.println("double : "+d);
        }
}
```

CHAR, BOOLEAN

PROGRAM 59

```
import java.util.*;
class Example{
        public static void main(String args[]){
                char ch;
                ch='A';
                System.out.println("ch : "+ch); //print A

                boolean b;
                b=10>9;
                System.out.println("b : "+b); //prints true
        }
}
```

INPUTS

PROGRAM 60

```
import java.util.*;
class Example{
        public static void main(String args[]){
                Scanner input=new Scanner(System.in);
                byte b;
                b=input.nextByte();

                short s;
                s=input.nextShort();

                int x;
                x=input.nextInt();

                long y;
                y=input.nextLong();

                float f;
                f=input.nextFloat();

                double d;
                d=input.nextDouble();
        }
}
```

PROGRAM 61

```
import java.util.*;
class Example{
      public static void main(String args[]){
            Scanner input=new Scanner(System.in);
            int x,y,z;
            x=input.nextInt();
            y=input.nextInt();
```

```
            z=x+y;
            System.out.println(x+" + "+y+" = "+z); //100 + 200 = 300
      }
}
```

PROGRAM 62 FROM 61 (WRONG LOGIC)

```
import java.util.*;
class Example{
      public static void main(String args[]){
            Scanner input=new Scanner(System.in);
            int x,y,z;
            System.out.println("Input number 1 : ");
            System.out.println("Input number 2 : ");
            x=input.nextInt();
            y=input.nextInt();
            z=x+y;
            System.out.println(x+" + "+y+" = "+z); //100 + 200 = 300
      }
}
```

PROGRAM 63 (CORRECT PROGRAM)

```
import java.util.*;
class Example{
      public static void main(String args[]){
            Scanner input=new Scanner(System.in);
            int x,y,z;
            System.out.print("Input number 1 : ");
            x=input.nextInt();
            System.out.print("Input number 2 : ");
            y=input.nextInt();
            z=x+y;
            System.out.println(x+" + "+y+" = "+z); //100 + 200 = 300
      }
}
```

PROGRAM 64

```
import java.util.*;
class Example{
      public static void main(String args[]){
            Scanner input=new Scanner(System.in);
            int age;
            System.out.print("Input your age : ");
            age=input.nextInt();
            System.out.println("Current age : "+age);

            //your age after 10 years
```

```
            //
            //
            System.out.println("Age after 10 years : "+age);
      }
}
```

PROGRAM 65 FROM 64

```
import java.util.*;
class Example{
      public static void main(String args[]){
            Scanner input=new Scanner(System.in);
            int age;
            System.out.print("Input your age : ");
            age=input.nextInt();
            System.out.println("Current age : "+age);

            //find your age after 10 years


            System.out.println("Age after 10 years : "+age);
      }
}
```

PROGRAM 66

```
import java.util.*;
class Example{
      public static void main(String args[]){
            Scanner input=new Scanner(System.in);
            System.out.print("Input number 1 : ");
            int x=input.nextInt();
            System.out.print("Input number 2 : ");
            int y=input.nextInt();

            System.out.println(x+" "+y);  //10 20
            //
            //Insert code here
            //
            System.out.println(x+" "+y); //20 10
      }
}
```

PROGRAM 67 FROM 66

```
import java.util.*;
class Example{
      public static void main(String args[]){
            Scanner input=new Scanner(System.in);
            System.out.print("Input number 1 : ");
```

```
            int x=input.nextInt();
            System.out.print("Input number 2 : ");
            int y=input.nextInt();

            System.out.println(x+" "+y);  //10 20
            //

            //
            System.out.println(x+" "+y); //20 10
      }
}
```

PROGRAM 68 FROM 67

```
import java.util.*;
class Example{
      public static void main(String args[]){
            Scanner input=new Scanner(System.in);
            System.out.print("Input number 1 : ");
            int x=input.nextInt();
            System.out.print("Input number 2 : ");
            int y=input.nextInt();

            System.out.println(x+" "+y);  //10 20
            //

            //
            System.out.println(x+" "+y); //20 10
      }
}
```

VARIABLES

PROGRAM 69

```
class Example{
      public static void main(String args[]){
            int x; //Create a memory location (Variable declaration)
            x=100; //Assign 100 into x (Variable initialization)
            System.out.println(x); //Print value of x
      }
}
```

PROGRAM 70

```
class Example{
	public static void main(String args[]){
		int x;
		x=100;
		System.out.println('x');
	}
}
```

PROGRAM 71

```
class Example{
	public static void main(String args[]){
		int x;
		//x=100;
		System.out.println(x);
	}
}
```

PROGRAM 72

```
class Example{
	public static void main(String args[]){
		int x;
		System.out.println(x); //Illegal
		x=100;
	}
}
```

PROGRAM 73

```
class Example{
	public static void main(String args[]){
		int x;
		x=100;
		x=200;
		System.out.println(x); //output
	}
}
```

PROGRAM 74

```
class Example{
	public static void main(String args[]){
		int x;
		x=100;
		System.out.println(x);
		x=200;
		System.out.println(x);
```

```
	}
}
```

PROGRAM 75

```
class Example{
	public static void main(String args[]){
		int x;
		x=100;
		System.out.println(x);

		int y;
		y=200;
		System.out.println(y);
	}
}
```

PROGRAM 76

```
class Example{
	public static void main(String args[]){
		int x=100;
		System.out.println(x);

		int y=200;
		System.out.println(y);
	}
}
```

PROGRAM 77

```
class Example{
	public static void main(String args[]){
		int x,y,z;
		x=100;
		y=200;
		z=300;
		System.out.println(x);
		System.out.println(y);
		System.out.println(z);
	}
}
```

PROGRAM 78

```
class Example{
	public static void main(String args[]){
		int x=100,y,z=300;
		y=200;
		System.out.println(x);
```

```
            System.out.println(y);
            System.out.println(z);
      }
}
```

PROGRAM 79

```
class Example{
      public static void main(String args[]){
            int x,y,z;
            x=y=z=300;
            System.out.println(x);  //prints
            System.out.println(y);  //prints
            System.out.println(z);  //prints
      }
}
```

PROGRAM 80

```
class Example{
      public static void main(String args[]){
            int x,y,z;
            x=y=z=300;
            System.out.println(x);
            System.out.println(y);
            int z; //Illegal
            z=400;
            System.out.println(z);
      }
}
```

PROGRAM 81

```
class Example{
      public static void main(String args[]){
            int x,y;
            x=10;
            y=20;
            System.out.println(x);
            System.out.println(y);
            x=y;
            System.out.println(x);
            System.out.println(y);
      }
}
```

PROGRAM 82

```
class Example{
      public static void main(String args[]){
```

```
            int x=y=z=100; //Illegal

            System.out.println(x);
            System.out.println(y);
            System.out.println(z);
      }
}
```

PROGRAM 83

```
class Example{
      public static void main(String args[]){
            int r=100;
            int R=200;
            System.out.println(r);
            System.out.println(R);
      }
}
```

PROGRAM 84

```
class Example{
      public static void main(String args[]){
            int a=10,b=20;
            System.out.println('a');
            System.out.println(a);
            System.out.println("a");
            System.out.println('b');
            System.out.println(b);
            System.out.println("b");
            System.out.println('c');
            System.out.println(c);
            System.out.println("c");
      }
}
```

PROGRAM 85

```
lass Example{
      public static void main(String args[]){
            int x=100;
            int y=200;
            int z;
            z=x+y;
            System.out.println(z);
            z=y-x;
            System.out.println(z);
            z=x*y;
            System.out.println(z);
            z=y/x;
```

```
            System.out.println(z);
      }
}
```

VARIABLE SCOPE AND LIFETIME

PROGRAM 86

```
class Example{
        public static void main(String args[]){
                int x=100;
                System.out.println(x);
                {
                        int y=200;
                        System.out.println(x);
                        System.out.println(y);
                        x++;
                        y++;
                }
                System.out.println(x);
                System.out.println(y); //Illegal
        }
}
```

PROGRAM 87

```
class Example{
        public static void main(String args[]){
                int x=100;
                System.out.println(x);
                {
                        int y=200;
                        System.out.println(x);
                        System.out.println(y);
                        x++;
                        y++;
                }
                int y=2;
                int x=1;
                System.out.println(x);
                System.out.println(y);
        }
}
```

PROGRAM 88

```
class Example{
        public static void main(String args[]){
                int x=100;
                System.out.println(x);
                {
                        int y=200;
                        System.out.println(x);
                        System.out.println(y);
                        x++;
```

```
                        y++;
                        int y=10;
                        int x=20;
                }
                int y=2;
                int x=1;
                System.out.println(x);
                System.out.println(y);
        }
}
```

PROGRAM 89

```
class Example{
        public static void main(String args[]){
                int x=100;
                System.out.println(x);
                { //Starting  a new code block
                        int y=200;
                        System.out.println(x);
                        System.out.println(y);
                        x++;
                        y++;
                        //int y=10;
                        //int x=20;
                }//ending the code block
                //int x=1;
                System.out.println(x);//x should 115
                System.out.println(y);//y should 100
        }
}
```

PROGRAM 90

```
class Example{
        public static void main(String args[]){
                {
                        int y=0;
                        System.out.println(y);
                        y++;
                }
                {
                        int y=0;
                        System.out.println(y);
                        y++;
                }
                {
                        int y=0;
                        System.out.println(y);
                        y++;
                }
                {
                        int y=0;
                        System.out.println(y);
                        y++;
                }
```

```
        }
}
```

FINAL VARIABLES

PROGRAM 91

```
import java.util.*;
class Example{
        public static void main(String args[]){
                int x;
                final int y;
                x=100;
                y=200;
                System.out.println(x+" "+y);

                x=10;
                y=20; //Illegal
                System.out.println(x+" "+y);
        }
}
```

PROGRAM 92

```
import java.util.*;
class Example{
        public static void main(String args[]){
                short a=10; //16 bits -->-32768 to 32767
                byte b; //8 bits -> -128 to 127
                b=a; //Illegal
                b=(byte)a; //Legal
        }
}
```

PROGRAM 93

```
import java.util.*;
class Example{
        public static void main(String args[]){
                short a=100;
                final short b=100;
                final short c;
                c=100;

                byte x;
                x=a; //Illegal
                x=b; //Legal
                x=c; //Illegal
        }
}
```

STRING CONCATENATION VS ARITHMETIC ADDITION

PROGRAM 94

```
class Example{
	public static void main(String args[]){
		System.out.println("ABC"+"PQR");// ABCPQR ->String Concat
		System.out.println(10+20);	// 30 ->Arithmetic Add
	}
}
```

PROGRAM 95

```
class Example{
	public static void main(String args[]){
		System.out.println(10+20); //
		System.out.println("10"+"20"); //
		System.out.println(10+"20"); //
		System.out.println("10"+20); //
		System.out.println("10+20"); //
	}
}
```

PROGRAM 96

```
class Example{
	public static void main(String args[]){
		int x=10,y=20;
		System.out.println(x+y);
		System.out.println("x+y");
		System.out.println("x"+y);
		System.out.println(x+"y");
	}
}
```

PROGRAM 97

```
class Example{
	public static void main(String args[]){
		System.out.println("10+20+30");	//Line 1 =>10+20+30
		System.out.println("10+20"+"30");	//Line 2 =>10+2030
		System.out.println("10"+"20+30");	//Line 3 =>1020+30
		System.out.println("10"+"20"+"30");	//Line 4 =>102030
		System.out.println(10+"20"+"30");	//Line 5 =>102030
		System.out.println("10"+20+"30");	//Line 6 =>102030
		System.out.println("10"+"20"+30);	//Line 7 =>102030
		System.out.println("10"+20+30);	//Line 8 =>102030
		System.out.println(10+20+"30");	//Line 9 =>3030
		System.out.println(10+20+30);	//Line 10=>60
	}
}
```

PROGRAM 98

```
class Example{
      public static void main(String args[]){
            int x=10,y=20,z=30;
            System.out.println("x+y+z");        //Line 1
            System.out.println("x"+"y"+"z");    //Line 2
            System.out.println("x"+"y"+z);      //Line 3
            System.out.println("x"+y+"z");      //Line 4
            System.out.println(x+"y"+"z");      //Line 5
            System.out.println(x+"y"+z);        //Line 6
            System.out.println("x"+y+z);        //Line 7
            System.out.println(x+y+"z");        //Line 8
      }
}
```

PROGRAM 99

```
class Example{
      public static void main(String args[]){
            int x;
            x=100;
            System.out.println(); //output-> Value of x is : 100
      }
}
```

PROGRAM 100 FROM 99

```
class Example{
      public static void main(String args[]){
            int x;
            x=100;
            System.out.println("Value of x is : "+x); //output-> Value of x
is : 100
      }
}
```

PROGRAM 101

```
class Example{
      public static void main(String args[]){
            int x=100;
            int y=200;
            System.out.println(); //100 200
      }
}
```

PROGRAM 102

```
class Example{
	public static void main(String args[]){
		int x=100;
		int y=200;
		System.out.println(x+" "+y); //100 200
	}
}
```

PROGRAM 103

```
class Example{
	public static void main(String args[]){
		int x,y,z;
		x=100;
		y=200;
		z=x+y;
		System.out.println(); //output should 100 + 200 = 300
	}
}
```

PROGRAM 104

```
class Example{
	public static void main(String args[]){
		int x,y,z;
		x=100;
		y=200;
		z=x+y;
		System.out.println(x+" + "+y+" = "+z); //100 + 200 = 300
	}
}
```

UNICODE CHARACTER SYSTEM

PROGRAM 105

```
class Example{
	public static void main(String args[]){
		System.out.println('A'); //prints A
		System.out.println(65); //prints 65

		System.out.println('\u0041'); //prints A
		//Unicode Character System

	}
}
```

PROGRAM 106

```
class Ex\u0061mple{
	public static void main(String args[]){
		char \u0061='\u0041';
		System.out.println(a); //prints A
	}
}
```

PROGRAM 107

```
class Example{
	public static void main(String args[]){
		int a=1,\u0062=1;
		System.out.println("a");
		System.out.println('a');
		System.out.println(a);
		System.out.println("b");
		System.out.println(b);
		System.out.println('a');
		System.out.println("c");
		System.out.println('c');
		System.out.println(c);
	}
}
```

PROGRAM 108

```
class Example{
	public static void main(String args[]){
		int \u0062=100;
		System.out.println(b); //100
		System.out.println('b'); //b
		//System.out.println(\u0063);
		System.out.println(\u0062); //Legal =>100
		System.out.println('\u0062');// b
	}
}
```

ESCAPE CHARACTERS

Escape Sequence	Description
\ddd	Octal character (ddd)
\uxxxx	Hexadecimal Unicode character (xxxx)
\'	Single quote
\"	Double quote
\\	Backslash
\r	Carriage return
\n	New line (also known as line feed)
\f	Form feed
\t	Tab
\b	Backspace

PROGRAM 109

```
class Example{
	public static void main(String args[]){
		char ch='\b';
		System.out.println("AB"+ch+"CD"); //prints ACD

		ch='\t';
		System.out.println("AB"+ch+"CD"); //prints AB CD

		ch='\n';
		System.out.println("AB"+ch+"CD"); //
	}
}
```

PROGRAM 110

```
class Example{
	public static void main(String args[]){
		System.out.println("AB\bCD"); //ACD
		System.out.println("AB\tCD"); //
		System.out.println("AB\nCD"); //
	}
}
```

PROGRAM 111

```
class Example{
	public static void main(String args[]){

		System.out.println("AB\rCD"); //Legal
		System.out.println("AB\fCD"); //Legal
		System.out.println("AB\nCD"); //Legal
		System.out.println("AB\tCD"); //Legal
		System.out.println("AB\bCD"); //Legal
		System.out.println("AB\gCD"); //Illegal
	}
}
```

PROGRAM 112

```
class Example{
	public static void main(String args[]){
		System.out.println("/\\/\\/\\");
		System.out.println("\"Hello\"");

	}
}
```

PROGRAM 113

```
class Example{
	public static void main(String args[]){
		char ch='\''; //
		System.out.println("AB"+ch+"CD");
```

```
                ch='\"'; //
                System.out.println("AB"+ch+"CD");

                ch='\\'; //
                System.out.println("AB"+ch+"CD");
        }
}
```

PROGRAM 114

```
class Example{
        public static void main(String args[]){
                char ch;
                ch='\t'; //Legal
                ch='\w'; //Illegal

        }
}
```

EXERCISE

PROGRAM 115

```
class Example{
        public static void main(String args[]){
                double d=0.1223;
                //print it

                d=0.0000002323023;
                // print it

                d=121221121;
                // print it
        }
}
```

PROGRAM 116

```
class Example{
        public static void main(String args[]){
                char ch='A';
                // print it

                ch=66; //ASCII B
                // print it
        }
}
```

PROGRAM 117

```
class Example{
        public static void main(String args[]){
                System.out.println("A"+"B"); // output
                System.out.println('A'+"B"); // output
```

```
                System.out.println('A'+'B'); // output
                System.out.println('A'+100); // output

        }
}
```

PROGRAM 118

```
class Example{
        public static void main(String args[]){
                char ch='A';
                int x=65;
                // print it
                // print it
        }
}
```

PROGRAM 119

```
class Example{
        public static void main(String args[]){
                System.out.println('7'+0); // output
                System.out.println(7+7); // output
                System.out.println('7'+7); // output
                System.out.println('7'+'7');  // output
                System.out.println("7"+7); // output
                System.out.println("7"+"7"); // output
        }
}
```