



STEPPING STONE
SCHOOL (HIGH)

CLASS : IX

Subject: Computer Application

Date: 18/06/20

Topic: Concept of data type, Loop

Time Limit: 1 hour

Worksheet No. : 8

[Minutely go through all the topics given below.]

Question 1

What is implicit type conversion?

In a mixed expression, lower data type gets automatically converted in the higher data type without any intervention of the user is known as implicit type conversion.

The conversion of a data type which is carried out automatically by the compiler without programmer intervention is called the implicit type conversion.

For example

```
int a=5,b=10;
```

```
long c=0;
```

```
c=a+b;
```

(lower data type a and b automatically converted to higher data type c
)

Question 2

What is explicit type conversion?

In a mixed expression when higher data type gets converted to lower datatype by programmers intervention that type conversion is known as explicit type conversion

Example

```
long a=1234,b=5678;
```

```
int c=0;
```

```
c=(int)a+b;
```

Program 1

Write a program to print the given output.

```
1      11      111      1111      11111
```

```
class Display
```

```
{
```

```
    public static void main()
```

```
    {
```

```
        int i,s=0;
```

```

for(i=1;i<=5;i=i+1)
{
    s=s*10+1;
    System.out.print(s+" ");
}
}
}

```

Explanation

x is 0 in the beginning.

So $x = 0 * 10 + 1 = 1$

$x = 1 * 10 + 1 = 11$

$x = 11 * 10 + 1 = 111$

$x = 111 * 10 + 1 = 1111$

$x = 1111 * 10 + 1 = 11111$

Program 2

Write a program to print the given output.

1 12 123 1234 12345

```

class Display
{
    public static void main()
    {

```

```
int i,s=0;

for(i=1;i<=5;i=i+1)
{
    s=s*10+i;
    System.out.print(s+" ");
}
}
```

Explanation :

x is 0 in the beginning

$$x = 0 * 10 + 1 = 1$$

$$x = 1 * 10 + 2 = 12$$

$$x = 12 * 10 + 3 = 123$$

$$x = 123 * 10 + 4 = 1234$$

$$x = 1234 * 10 + 5 = 12345$$

Program 3

Write a program the given output.

1 22 333 4444 55555

```

class Display
{
    public static void main()
    {

        int i,x=0,y=0;

        for(i=1;i<=5;i=i+1)
        {
            x=x*10+1;
            y=x*i;
            System.out.print(y+" ");
        }
    }
}

```

Explanation

x=0 and y=0 in the beginning

$$x=0*10+1=1 \quad y=i*1=1$$

$$x=1*10+1=11 \quad y=11*2=22$$

$$x=11*10+1=111 \quad y=111*3=333$$

$$x=111*10+1=1111 \quad y=1111*4=4444$$

$$x=1111*10+1=11111 \quad y=11111*5=55555$$

Program 4

Input a number from the user and check whether the number is present in the Fibonacci series or not.

```
class Display
{
    public static void main(int n)
    {

        int i,a=0,b=1,c=0,k=0;
        for(i=1;i<=n;i=i+1)
        {
            /*
            As all the numbers generated by a are fibonacci
            numbers if value of a is matching with inputed number
            n then we are increasing the value of k by 1.
            */
            if(a==n)
            {
                k=k+1;
            }
            c=a+b;
            a=b;
            b=c;
        }
    }
}
```

```
if(k==0)
{
    System.out.print(n+" is not a fibonacci number ");
}
else
{
    System.out.print(n+" Is fibonacci number ");
}
}
```