



Topic $\Rightarrow$ User Defined Methods
(Constructors)

Lecture # 11

Data Type	Default Value
byte	0
Short	0
int	0
long	0L
float	0.0f
double	0.0
char	'\u0000'
String	null



* Constructors

1. A constructor is invoked automatically when an object is created by it.
2. Name of the constructor has to be same as that of the class.
3. A constructor cannot return any value.

Functions (Methods)

1. A method is required to be called by the programmer to be executed.
2. As a convention, method names are kept different from class names.
3. A method returns a value if programmed for.



Default / Non Parameterised Constructor

1. It is provided by java compiler if no constructor has been provided by the programmer.
2. There are no parameters
3. It assigns data members with java system default values.

Parameterised Constructor

1. It is always provided by the programmer.
2. It has parameters.
3. It assigns data members with values of the parameters received.

Fun - FUN

Class Edit Tools Options

Fun X

Compile Undo Cut Copy Paste Find... Close Source Code

```
class Fun
{
int i;
byte b;
short s;
long l;
double d;
float f;
String st;
boolean bo;
char ch;
public static void main (String args[])
{
    Fun ob = new Fun();
    System.out.println("int = "+ob.i);
    System.out.println("byte = "+ ob.b);
    System.out.println("short = "+ob.s);
    System.out.println("long = "+ob.l);
    System.out.println("double = "+ob.d);
    System.out.println("float = "+ob.f);
    System.out.println("String = " +ob.st);
    System.out.println("Boolean = "+ob.bo);
    System.out.println("Char = "+ob.ch);
}
}
```

saved

BlueJ: Terminal Window - FUN

Options

```
int = 0
byte = 0
short = 0
long = 0
double = 0.0
float = 0.0
String = null
Boolean = false
Char = \
```



⇒ Program

⇒ Output

8

Design a class Triangle as follows :

Data members/Instance variables:

int a,b,c : To store 3 sides of a triangle

double s : To store semiperimeter of the triangle

public Triangle () : default constructor to initialise data members by their default value.

Member methods :

void accept() : to input 3 sides of the triangle

void SemiPeri() : to calculate semiperimeter of the triangle

double area () : to find and return area of triangle

Also write main method to create object and call the above functions to find the area of the triangle and display it.



Ans

```
import java.util.Scanner;
class Triangle
{
    int a,b,c;
    double s;

    public Triangle()
    {
        a=b=c=0;
        s=0.0;
    }

    void accept()
    {
        Scanner ob = new Scanner(System.in);
        a=ob.nextInt();
        b=ob.nextInt();
        c=ob.nextInt();
    }
}
```

```
void SemiPeri()
{
    s = (a+b+c)/2.0;
}

double area()
{
    double ar = Math.sqrt(s*(s-a)*(s-b)*(s-c));
    return ar;
}

public static void main (String args[])
{
    Triangle obj = new Triangle ();
    obj.accept();
    obj.SemiPeri();
    Sopln(obj.area());
}
}
```

h/w 8

Design a class FruitJuice as follows :

Data members / Instance Variable

int product_code --> To store product code number

String flavour --> To store flavour of Juice

String pack_type --> Type of bottle (Eg: Tetrapack, PETB, etc.)

int pack_size --> (500ml, 1000ml, etc.)

int product_price --> (Rs.10, Rs.20, Rs.95, etc.)

Member methods :

FruitJuice () : Default constructor to initialise int data members by 0
and String by null.

void input () : Input and store the details

void discount() : to reduce the product price by Rs.10

Also write main method to create object and call above function.





Homework $\Rightarrow$ Do the marked
& as HIW
& send it to
me on WhatsApp



Thank you