



# JAVA

## Concepts of Programming Day 2: March 2022

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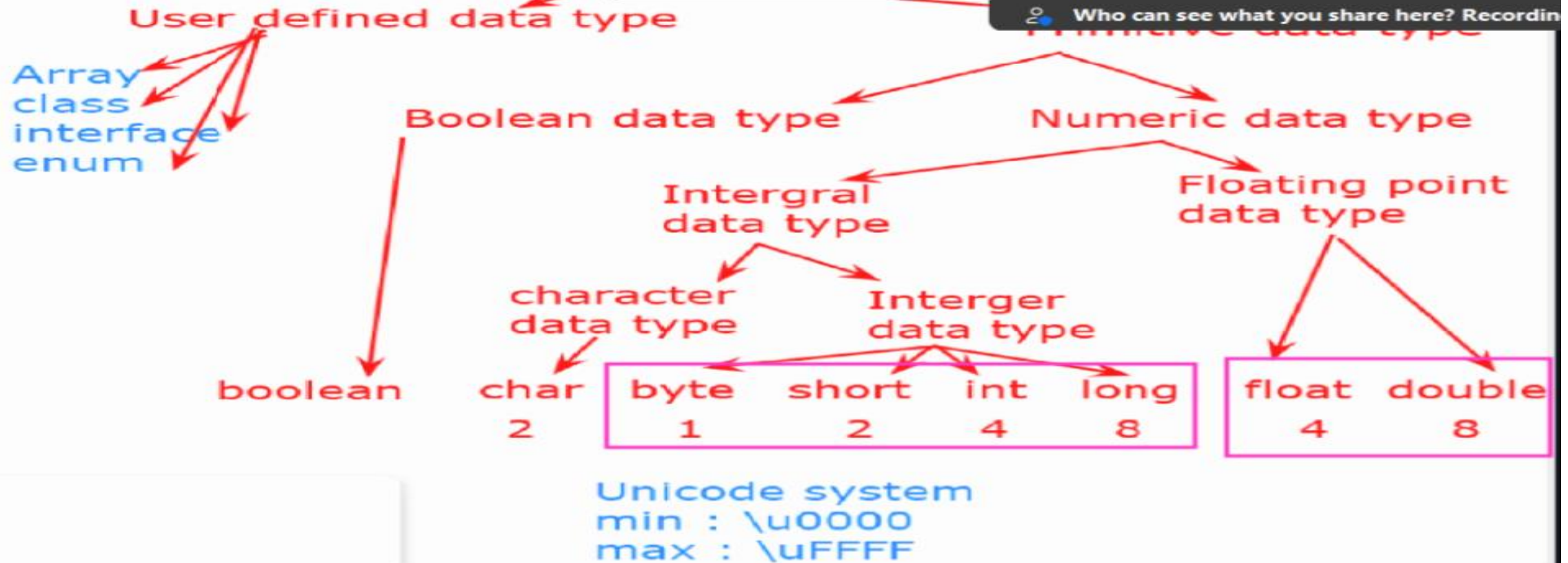


java

# Outlines

- Class
- Object
- Features of Java
- OOPS concepts
- Programs

## Data Type:



```
class Primitive
{
    public static void main(String args [])
    {
        boolean b = true; //true/false
        byte by = 127;
        short sh = 555;
        int i = 99999;
        long l = 999999999999L;
        System.out.println(b);
        System.out.println(by);
    }
}
```

## Armstrong Number:

$$\begin{array}{ccccccc}
 & & 3 & & 2 & & 1 \\
 153 & = & 1^3 & + & 5^3 & + & 3^3 \\
 & = & 1 & + & 125 & + & 27 \\
 & = & 153
 \end{array}$$

$$\begin{array}{l}
 Q = 153 / 10 = 15 \\
 R = 153 \% 10 = 3
 \end{array}$$

$$\begin{array}{l}
 Q = 15 / 10 = 1 \\
 R = 15 \% 10 = 5
 \end{array}$$

$$\begin{array}{l}
 Q = 1 / 10 = 0 \\
 R = 1 \% 10 = 1
 \end{array}$$

$$\begin{array}{l}
 135 = 1 + 27 + 125 \\
 = 153
 \end{array}$$



import java.util.\*;

Mouse

Select

Text

Draw

Stamp

Spotlight

Eraser

Format

Undo



Who can see what you share here? Recording On

```
class Armstrong
```

```
{
```

```
    public static void main(String args[])
```

```
    {
```

```
        Scanner sc = new Scanner(System.in);
```

```
        int n1=sc.nextInt();
```

```
        int temp = n1; //153
```

```
        int res;
```

```
        int sum=0;
```

```
        while(n1>0)
```

```
        {
```

```
            res=n1%10;
```

```
            sum=sum+(res*res*res);
```

```
            n1=n1/10;
```

```
        }
```

```
        if(temp == sum)
```

```
            System.out.println("Armstrong Number");
```

```
        else
```

```
            System.out.println("Not an Armstrong Number");
```

```
    }
```

```
}
```

09-03-2022

KW: CDAC Mumbai (JH/KH)

import java.util.\*;

class Armstrong

{

public static void main(String args[])

{

Scanner sc = new Scanner(System.in);

int n1=sc.nextInt();

int temp = n1;//153

int res;

int sum=0;

while(n1>0)

{

res=n1%10;

sum=sum+(res\*res\*res);

n1=n1/10;

}

if(temp == sum)

System.out.println("Armstrong Number");

else

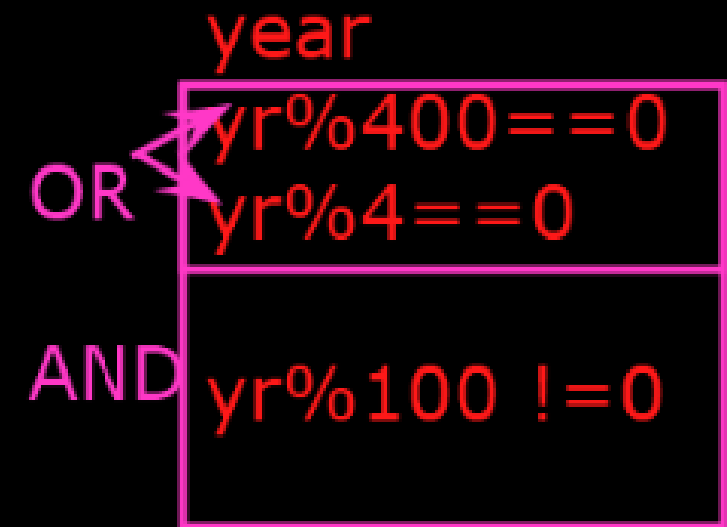
System.out.println("Not an Armstrong Number")

}

}

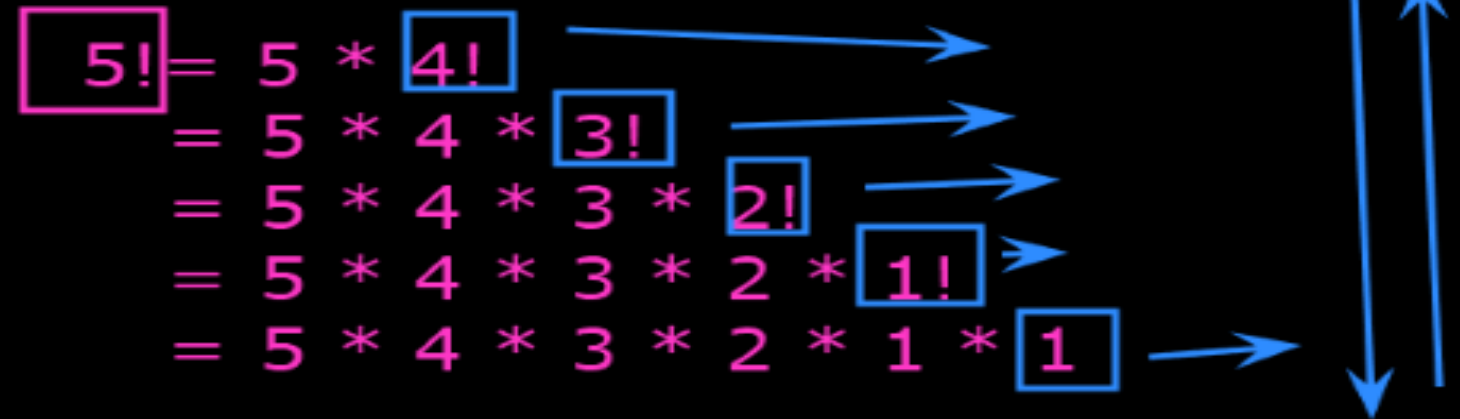
n1=1/10=0  
temp=153  
sum=152+1=153  
res=1

```
if((yr%400==0)||(yr%4==0)&&(yr%100!=0))
```



# Factorial

-----

$$\begin{aligned} 5! &= 5 * 4! \\ &= 5 * 4 * 3! \\ &= 5 * 4 * 3 * 2! \\ &= 5 * 4 * 3 * 2 * 1! \\ &= 5 * 4 * 3 * 2 * 1 * 1 \end{aligned}$$


`int fact=1;`

```
fact=5!  
for(int i =1;i<=fact;i++)  
{  
    fact=fact * i;  
}
```



# DEcimal to Binary Conversion

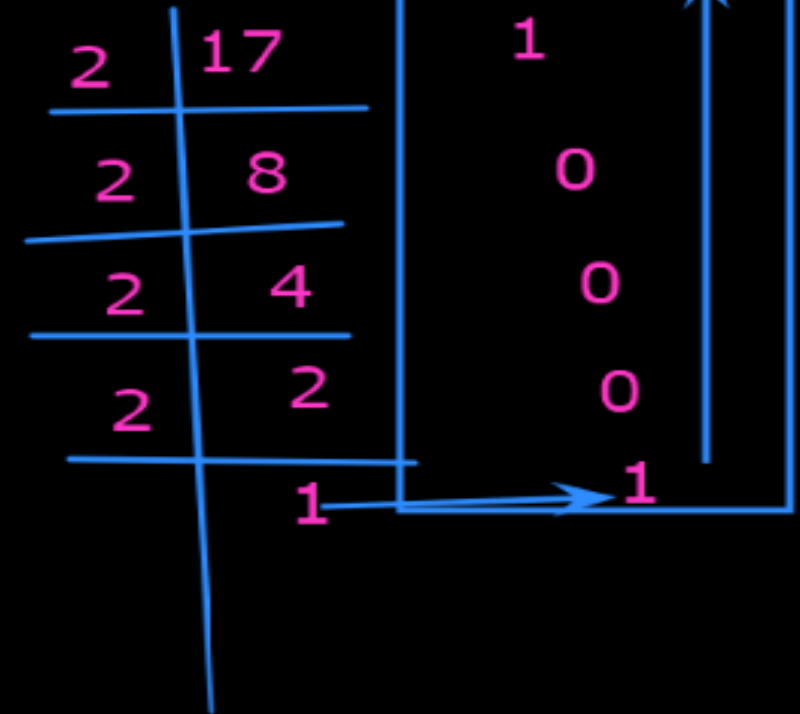
```

n=17;
String bin="";
while(n>0)
{
    int r =n%2
    bin = bin + r;
    n=n/2
}

SOP(bin);
  
```

Dec: 17

Bin= 10001

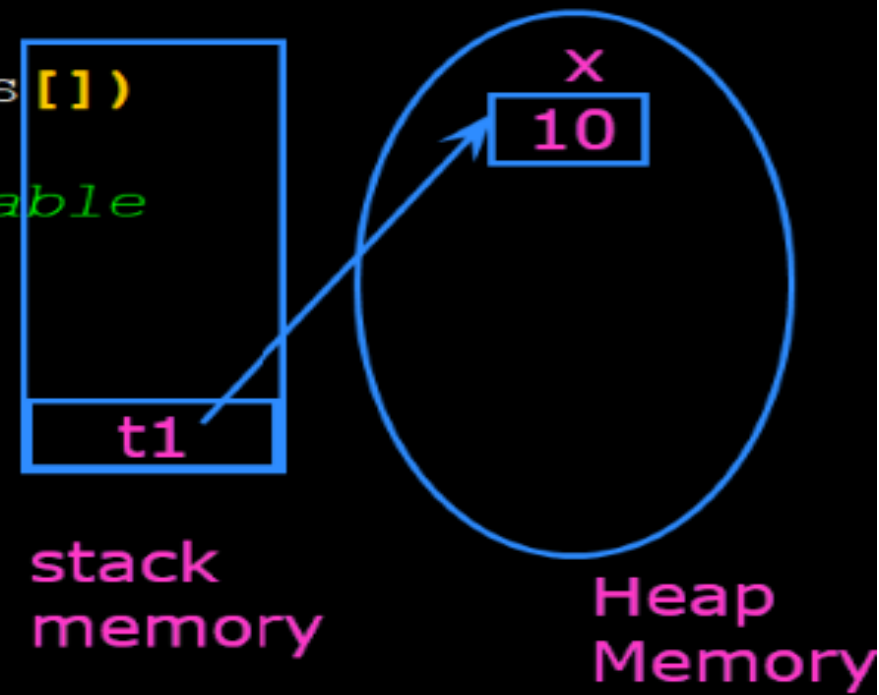


$Q=n/2$   
 $R=n\%2$

```
class Test
{
    int x=10;//class variable/instance variable

    public void display()
    {
        System.out.println("Hello CDAC Mumbai!!!");
    }
}
```

```
public static void main(String args[])
{
    //create object:reference variable
    Test t1 = new Test();
    System.out.println(t1.x);
    t1.display();
}
```



```
class Circle
```

```
{
```

```
    int r;
```

```
    area()
```

```
{
```

```
        int a=3.14*r*r;
```

```
}
```

```
main()
```

```
{
```

```
    Circle c1 =new Circle();
```

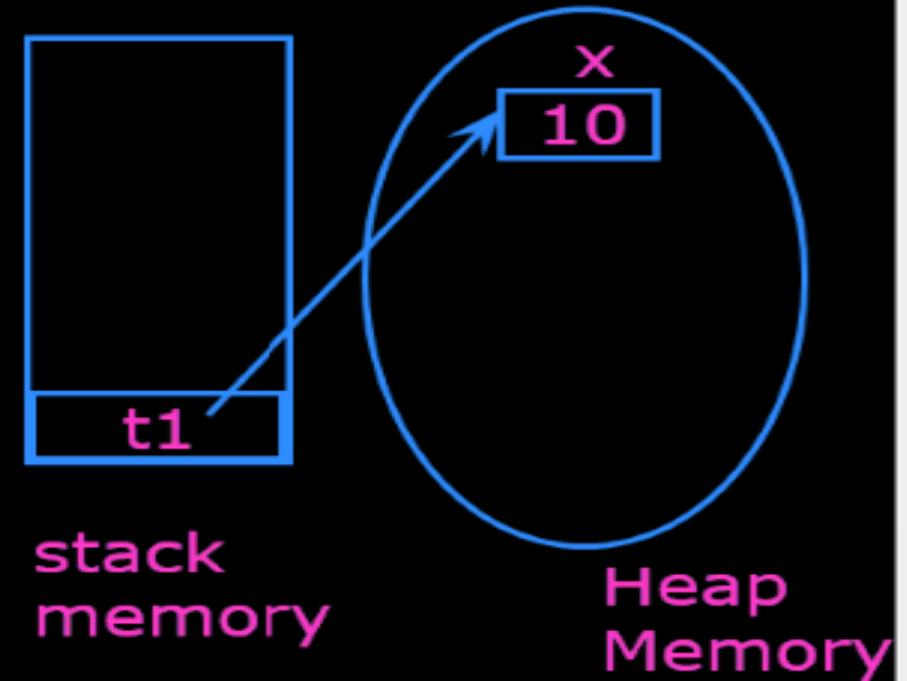
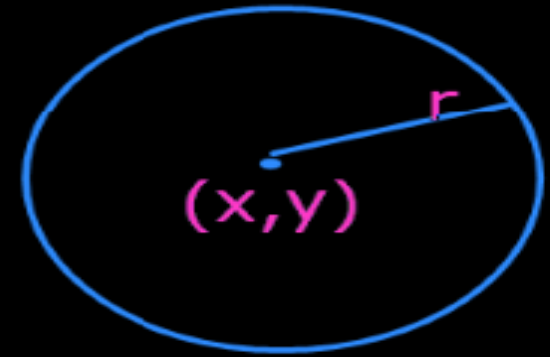
```
    c1.r=5;
```

```
    SOP(c1.area());
```

```
}
```

```
}
```

```
    Circle c2 = new Circle();
```



```
class Test
{
    int x=10; //class variable/instance variable

    public void display()
    {
        System.out.println("Hello CDAC Mumbai!!!");
    }

    public static void main(String args[])
    {
        //create object:reference variable
        Test t1 = new Test();
        System.out.println(t1.x);
        t1.display();
    }
}
```