Dt : 3/12/2020

***imp**

Object Oriented Programming:

=>The process of constructing application using class-Object concept is known as Object Oriented Programming.

Note:

program ===> set of Instructions

programming(Coding) ===> The process of constructing a program

programmer ===> The person who writes the program

=>In Object oriented programming we control NonPrimitive datatypes or Referential datatypes.

- **(a)Class**
- **(b)Interface**
- **(c)Array**
- **(d)Enum**

(a)Class:

=>Class is a 'Structured Layout' and which generates Objects.

=>Class is loaded onto Method Area of JVM.

=>Class is a Collection of Variables and Methods.

=>Classes in Java are categorized into two types:

1. **User Defined Classes**

2.Built-In Classes

1.User Defined Classes:

=>The classes which are defined by the programmer are known as 'User defined classes'.

Exp:

above programs,

Addition

Employee

EmpDetails

EmpAddress

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2.Built-In Classes:

=>The classes which are available from JavaLib are known as Built-In classes

Exp:

String

System

Scanner

...

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'Scanner' Class:

=>"Scanner' class is a Built-in class available from 'java.util' package.

=>"Scanner" class methods are used to read the data into programs.

=>The following are some methods from 'Scanner' class:

- **nextByte() - to read byte data**
- **nextShort() - to read short data**
- **nextInt() - to read int data**
- **nextLong() - to read long data**
- **nextFloat() - to read float data**
- **nextDouble() - to read double data**
- **nextBoolean() - to read boolean data**
- **nextLine() - to read String data**

Method Signatures:

```
public byte nextByte();
public short nextShort();
public int nextInt();
public long nextLong();
public float nextFloat();
public double nextDouble();
public boolean nextBoolean();
public java.lang.String nextLine();
```

syntax of creating object for 'Scanner' class:

Scanner s = new Scanner(System.in);

Note:

=>In JavaLang 'System.in' represents connection to Console input keyboard.

Exp programs:

Assignment1(Solution):

wap to read and display Product details?

Product

=>pCode,pName,pPrice,pQty

=>void getProduct()

MainClass1

=>public static void main(String[] args)

```
import java.lang.String;
import java.lang.System;
import java.util.Scanner;
class Product //SubClass
{
        String pCode,pName;
        float pPrice;
        int pQty;
  void getProduct()
        {
```

```
System.out.println("pCode:"+pCode);
System.out.println("pName:"+pName);
System.out.println("pPrice:"+pPrice);
System.out.println("pQty:"+pQty);
        }
}
class MainClass1 //MainClass
{
        public static void main(String[] args)
        {
Scanner s = new Scanner(System.in);//Built-in class object
Product p = new Product();//User defined class object
System.out.println("Enter the ProdCode:");
p.pCode = s.nextLine();
System.out.println("Enter the ProdName:");
p.pName = s.nextLine();
System.out.println("Enter the ProdPrice:");
p.pPrice = s.nextFloat();
System.out.println("Enter the ProdQty:");
p.pQty = s.nextInt();

p.getProduct();//method call
        }
}
```

Assignment2(Solution):

wap to read and display Book details?

BookData

=>bCode,bName,bAuthor,bPrice,bQty

=>void getBookData()

MainClass2

=>public static void main(String[] args)

```
import java.lang.System;
import java.lang.String;
import java.util.Scanner;
class BookData //SubClass
{
        String bCode,bName,bAuthor;
        float bPrice;
        int bQty;
  void getBookData()
        {
System.out.println("BCode:"+bCode);
System.out.println("BName:"+bName);
System.out.println("BAuthor:"+bAuthor);
System.out.println("BPrice:"+bPrice);
System.out.println("BQty:"+bQty);
        }
}
```

```
class MainClass2 //MainClass
{
	public static void main(String[] args)
	{
Scanner s = new Scanner(System.in);//Built-in class object
BookData bd = new BookData();//User defined class object
System.out.println("Enter the BookCode:");
bd.bCode = s.nextLine();
System.out.println("Enter the BookName:");
bd.bName = s.nextLine();
System.out.println("Enter the BookAuthor:");
bd.bAuthor = s.nextLine();
System.out.println("Enter the BookPrice:");
bd.bPrice = s.nextFloat();
System.out.println("Enter the BookQty:");
bd.bQty = s.nextInt();

bd.getBookData();//method call
	}
}
```
