
Demos: Dated: 29/11/2019

```
package com.ibm.pack1;
```

```
import java.util.Scanner;
```

```
public class Main {
```

```
    public static void main(String[] args) {  
        /*System.out.println("Welcome to Java World");*/
```

```
        /*int num1=10,num2=20;  
        System.out.println("Sum= "+(num1+num2));*/
```

```
        /*System.out.println("Enter an int and a double value ");  
        Scanner sc = new Scanner(System.in);
```

```
        int n1 = sc.nextInt();  
        double d1 = sc.nextDouble();
```

```
        System.out.println("Sum = "+(n1+d1));*/
```

```
        /*System.out.println("Enter three integers");  
        Scanner sc = new Scanner(System.in);
```

```
        int n1 = sc.nextInt();  
        int n2 = sc.nextInt();  
        int n3 = sc.nextInt();
```

```
        int lar1 = (n1>n2)?n1:n2;  
        int lar = (lar1>n3)?lar1:n3;
```

```
        System.out.println("Largest = "+lar);  
        */
```

```
        /*System.out.println("Enter the percentage");
```

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

```
        double per = sc.nextDouble();
```

```
        if ((per<100) &&(per>=75))  
        {  
            System.out.format("Percentange =%.2f\n",per);  
            System.out.println("    Distinction");  
        }  
        else  
            if ((per<75)&&(per>=60))  
                System.out.println("First class");  
            else  
                System.out.println("Pass class");*/
```

```

/*System.out.println("Enter the number to be reversed:");

Scanner sc = new Scanner(System.in);

int num = sc.nextInt();
int cnum = num;
int revnum =0;
while(num!=0)
{
    int rem = num%10;
    revnum = revnum*10+rem;
    num = num/10;
}

System.out.println("Reverse of "+cnum+"    =    "+revnum);
if (cnum==revnum)
    System.out.println("Palidrome ");
else
    System.out.println("Not Palindrome");*/

```

```

/*System.out.println("Enter the number :");

Scanner sc = new Scanner(System.in);

String str = sc.next();

int len = str.length();

System.out.println("The length of the string    "+len);

int num = Integer.parseInt(str);
int cnum = num;
int anum =0;
while(num!=0)
{
    int digit = num%10;
    anum += Math.pow(digit,len);
    num = num/10;
}

if (anum == cnum)
    System.out.println("amstrong");
else
    System.out.println("Not amstrong");*/

```

```

System.out.println("Enter the number :");
Scanner sc = new Scanner(System.in);

int n    = sc.nextInt();

```

```

        long fact = factorial(n);

        System.out.println("factorial of "+n+" = "+fact );

        sc.close();

    }

    public static long factorial(int num)
    {
        long f=1;
        for (int i=1;i<=num;i++)
            f*=i;

        return f;
    }
}
*****

```

```

package com.ibm.pack1;

import java.util.Scanner;

public class Main {

    public static void main(String[] args) {

        System.out.println(" Enter month no:");
        Scanner sc = new Scanner(System.in);

        int mno = sc.nextInt();

        int days = getDays(mno);

        if (days ==0)

            System.out.println("Invalid month no.");
        else
            System.out.println(" the month "+mno+" has "+ days +"days");

    }

    public static int getDays(int mno)
    {
        int days =0;
        switch(mno)
        {
            case 1:
            case 3:
            case 5:
            case 7:

```

```

        case 8:
        case 10:
        case 12:    days =31;
                    break;

        case 2:    days =28;
                    break;

        case 4:
        case 6:
        case 9:
        case 11:
                    days =30;
                    break;

        default : days =0;

    }
    return days;
}

}

*****

package com.ibm.bookpack;
// All classes are children of root class   Object class
// Object is the root class in Java

public class Book {
    // instance variables
    // each object/ instance will be given a copy of these member variables to save its state
    private int bookId;
    private String bookName;
    private int bookPrice;

    // to construct object java provides a special   function called constructor
    //same name of the class
    // it gives the initial state of the object. Initialization
    // it can be different forms
    // generally its public
    // constructors dont return any value
    public Book(int bookId, String bookName, int bookPrice) {
        super();// inheritance
        this.bookId = bookId;
        this.bookName = bookName;
        this.bookPrice = bookPrice;
    }

    // It is method from the parent class : Object class
    // its purpose is to convert the object details into string and return the string
    @Override
    public String toString() {
        return "Book [bookId=" + bookId + ", bookName=" + bookName
            + ", bookPrice=" + bookPrice + "]";
    }
}

```

```

    }

    public int getBookId() {
        return bookId;
    }

    public String getBookName() {
        return bookName;
    }

    public int getBookPrice() {
        return bookPrice;
    }

    public void setBookPrice(int bookPrice) {
        this.bookPrice = bookPrice;
    }

```

```

}

```

```

package com.ibm.libpack;

import com.ibm.bookpack.Book;

public class Main {

    public static void main(String[] args) {

        Book book1 = new Book(100,"Java",300);

        System.out.println(book1);

        System.out.println(book1.getBookPrice());

        book1.setBookPrice(500);
        System.out.println(book1);

    }

}

*****

package com.ibm.consumerpack;

```

```

public class Consumer {
    // access specifier : private,public, protected , default : package friendly
    int mtno;
    private int unitConsumed;
    private int unitPrice;

    public Consumer(int mtno, int unitConsumed, int unitPrice) {
        super();
        this.mtno = mtno;
        this.unitConsumed = unitConsumed;
        this.unitPrice = unitPrice;
    }

    private double calcBill()
    {
        return (unitConsumed*unitPrice);
    }

    /* @Override
    public String toString() {
        return "Consumer [mtno=" + mtno + ", unitConsumed=" + unitConsumed
            + ", unitPrice=" + unitPrice + " Bill amount= " + calcBill() + "];"
    }*/
}

```

}

```

package com.ibm.consumerpack;

```

```

public class Adminclass {

    int adminNo;

    public String display()
    {
        Consumer c1 = new Consumer(500,400,2);
        return (adminNo+" "+c1.mtno);
    }

}

```

}

```

package com.ibm.KEBpack;

```

```

import com.ibm.consumerpack.Consumer;

```

```

public class KEB {

    public static void main(String[] args) {

```

```
Consumer c1 = new Consumer(100,2000,2);
```

```
System.out.println(c1);
```

```
}
```

```
}
```

```
*****
```

Assignments:

1. You need practice 5 expressions evaluation in Java
2. try nesting ternary operator and find the largest of 3 integers.
3. to find whether a number is a amstrong number

```
*****
```

Quiz

1.

What will be the output of below code snippet?

```
int i=20;
while(i<=20) {
System.out.println(i);
}
```

2.

What will be the output?

```
class Test{
public static void main(String[] args) {
    int i=3;
    i+=i++;
    System.out.println(i);
}
}
```

3.

What will be the result of the given code?

```
int i = 1, j = 7;
do {
    if (i > j) {
        break;
    }
    ++i;
    j--;
} while (i < 3);
System.out.println("i = " + i + ", j = " + j);
```

4.

What is the output of the below code:

```
public class Main {
    public static void main(String[] args) {
        char ch = '4';
        switch (ch) {
            case '1':
            case '2':
                System.out.print(ch);
                break;
            case '3':
            case '4':
                System.out.print(ch);
            case '5':
            case '6':
                System.out.print(ch);
        }
    }
}
```

5.

Predict output

```
class Test {
    private Test() {
        System.out.println("Test Class");
    }
}

public class TestProgram {
    public static void main(String[] args) {
        Test obj = new Test();
        obj.Test();
    }
}
```

6.

Choose the illegal identifiers in a java program?

- 1.int[] char;
- 2.boolean 1flag;
- 3.char Character;
- 4.double &sal;
- 5.long \$currency;

7.

```
public class Main {
    public static void main(String[] args) {
        int num1, num2 = 47;
        num1 = 0;

        if ((num1!=0)&&(num2/num1==0))
            System.out.println(num2);
        else
```



```
System.out.println(++num2);  
}  
}
```

8.
public class Main {
public static void main(String[] args) {
int [] arr;
System.out.println(arr.length());
}
}

9.
Choose the correct code which will replace '7' with '14' in the array 'arr' given below?

```
int[][] arr = {{5, 6, 2, 9}, {8, 3, 10, 0, 4}, {12, 7}};
```

10.

Predict the output

```
public class Main {  
public static void main(String[] args) {  
int arr[]= new int[3];  
System.out.println(arr[3]);  
}  
}
```

Quiz

1.
Observe the following Java code and give the output?
class TempClass {

```
int i;
```

```
public void TempClass(int j) {  
int i = j;  
}  
}
```

```
public class Test {
```

```
public static void main(String[] args) {  
TempClass temp = new TempClass(2);  
}  
}
```

2.

Question: Which of the following are true about the Scanner in Java?

- I. The Scanner object will parse the input read from a file or a console.
- II. The Scanner object will break the input read into tokens.
- III. The Scanner object breaks the data using delimiter, most commonly white space.

3.

A Java application has a Java Model class defined along with its data member as follows:

```
public class Flyer
{
    protected int Flyerobjectid;
    String FlyerobjectName;
    protected String Flyerobjectfeatures;
    private String Flying_parts
}
```

Based on the above class definition identify the correct option given below:

The access specifier for the data member 欵梗 lyerobjectName 欵◆ is _____.

4.

The constructor of a class can be called only in another _____ using _____.

5.

In Java, the static members of a class will be _____.
