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BATCH:-19 FEB EVENING BATCH

SUBJECT:-ALL LOGICAL PROGRAM AND ASSIGNMENT.

1.DECREMENT PATTERN PROGRAM

```java
package forloop;

public class DecrementPattern
{
    public static void main(String[] args)
    {
        int r,c;
        for(r=1;r<=5;r++)//For Rows
        {
            for(c=5;c>=r;c--)//For Coloumns
            {
                System.out.print("* ");
            }
            System.out.println();
        }
    }
}
```

OUTPUT:-

```
* * * *
* * *
* *
*
```

2.LEFT DECREMENT PATTERN PROGRAM

```java
package forloop;

public class PatternProgram
{
    public static void main(String[] args)
    {
        int r,c;
        for(r=1;r<=5;r++)//For Rows
        {
            for(c=1;c<=r;c++)//For Coloumns
            {
                System.out.print("* ");
            }
```

```java
            System.out.println();
        }
    }


}
```

OUTPUT:-

```
*
* *
* * *
* * * *
* * * * *
```

3. RIGHT INCREMENT PATTERN PROGRAM

```java
package patternprogram;

public class IncrementProgram
{
    public static void main(String[] args)
    {
        int i,j,k;
        for(i=1;i<=5;i++)//For Rows
        {
            for(k=5;k>=i;k--)//For Coloumns
            {
                System.out.print("  ");
            }
            for(j=1;j<=i;j++)//For Printing Star
            {
            System.out.print("* ");
            }
        System.out.println();
}
}
}
```

OUTPUT:-

```
        *
      * *
    * * *
  * * * *
* * * * *
```

4.PYRAMID PATTERN PROGRAM

```java
package patternprogram;

public class PyramidProgram
{
    public static void main(String[] args)
    {
        int i,j;
        for(i=1;i<=5;i++)//For Loop For Rows
        {
            for(j=5;j>=i;j--)//For Loop To Print Spaces
            {
                System.out.print(" ");
            }
            for(j=1;j<=i;j++)//For Loop To Print Star/For Loop For Coloumn
            {
            System.out.print(" *");
        }
            System.out.println("");
    }
}
}
```

OUTPUT:-

```
     *
    * *
   * * *
  * * * *
 * * * * *
```

4.REVERSE 3-DIGIT NUMBER

```java
package whileloop;

import java.util.Scanner;

public class ReverseThreeDigit
{
```

```java
public static void logic2()
{
        Scanner y = new Scanner (System.in);
        System.out.print("Enter Integer Value:-");
        int n= y.nextInt();
        y.close();
        int s=0;
        int t;
        while(n>0)
        {
            //LOGIC TO REVERSE 3-DIGIT  NUMBER.
            t=n%10;// 6 5 5
            s=s*10+t;//6 65 655
            n=n/10;//55 5 0
        }
        System.out.println("Reversed Number is:-"+s);
    }
    public static void main(String[] args)
    {
        logic2();//CALLING STATIC METHOD.
    }
}
```

OUTPUT:-

```
Enter Integer Value:-625
Reversed Number is:-526
```

5.ASSIGNMENT PRINT PRIME NUMBER

```java
package personalprojects;

import java.util.Scanner;

public class PrimeNumber
{
    public static void main(String[] args)
    {
        Scanner s=new Scanner(System.in);
        System.out.print("Enter The Integer Value:-");
        int num=s.nextInt();
        int i, temp=0;
        for(i=2;i<=num-1;i++)//Execute Till The Number is Less
Or Equal To 2.
```

```java
          {
                if(num%i==0)//Checking The Modulus Value Of Given
Number.
                {
                 System.out.println("Divisible by:-"+i);
                 temp=temp+1;
                 s.close();
                }
          }
          if(temp==0)//Check the Temp Value is 0 Or Not.
          {
                System.out.println(num + " is  a Prime
Number");//Print Prime Number.
          }
          else
          {
                System.out.println(num + " is not a Prime
Number");//Print Not A Prime Number.
          }

       }
}
```

OUTPUT:-

```
Enter The Integer Value:-16
Divisible by:-2
Divisible by:-4
Divisible by:-8
16 is not a Prime Number

Enter The Integer Value:-7
7 is  a Prime Number
```

6.ASSIGNMENT TO PRINT 100 TO 200 PRIME NUMBER

```java
package personalprojects;

public class PrimeHTT
{

    public static void main(String[] args)
    {
          int n=200;
          int i,j,temp=0;
```

```java
        System.out.print("Prime Numbers Are:-");
        for(i=100;i<=n;i++)
        {
                for(j=2;j<=i-1;j++)
                {
                if(i%j==0)//CHECKING THE MOD VALUE EQUAL TO ZERO
                {
                temp=temp+1;

                }

        }
        if(temp==0)
        {
                System.out.print(" "+i);//PRINT PRIME NUMBER.

        }
        else
        {
                temp=0;
        }

    }
    }
}
```

OUTPUT:-

```
Prime Numbers Are:- 101 103 107 109 113 127 131 137 139 149 151
157 163 167 173 179 181 191 193 197 199
```

7.ASSIGNMENT TO PRINT FACTORIAL OF A NUMBER

```java
package personalprojects;

import java.util.Scanner;

public class FactorialNumber
{
public static void main(String[]arg)
{
    Scanner s = new Scanner(System.in);
    System.out.println("Enter Any Integer Value:-");
    int num=s.nextInt();
    int i,fact=1;
```

```java
    for(i=1;i<=num;i++)//For Loop To Check The Condition
    {
        fact=fact*i;//Calculate The Factor Value.
        s.close();
    }
    System.out.println("Factorial Of " +num+ " is:-"
+fact);//Print The Factorial Value Of Given Number.

}
}
```

OUTPUT:-

```
Enter Any Integer Value:-6
Factorial Of 6 is:-720

Enter Any Integer Value:-3
Factorial Of 3 is:-6
```

8.ASSIGNMENT TO PRINT PALINDROME OF A NUMBER

```java
package personalprojects;

import java.util.Scanner;

public class Palidrome
{
public static void logic2()
{
    Scanner m=new Scanner(System.in);
            System.out.print("Enter Integer Value:-");
            int n=m.nextInt();
    int t=n;
    int s=0,r;

    while(t!=0)//Check Condition Till t Is Zero.
    {
        //LOGIC TO CHECK THE PALINDROME NUMBER.
        r=t%10;
        s=s*10+r;
        t=t/10;
    }
    if(n==s)//Check The Given Number Is Same As Variable S
Number
        {
```

```java
        System.out.println(n+" is a Palindrome Number");
        }
        else
        {
            System.out.println(n+" is not a Palindrome Number");
        }
        m.close();
}
public static void main(String[] args)
{
        logic2();//Static Method Calling In Main Method.
}

}
```

OUTPUT:-

```
Enter Integer Value:-531
531 is not a Palindrome Number

Enter Integer Value:-121
121 is a Palindrome Number

Enter Integer Value:-123
123 is not a Palindrome Number
```

535:-   r=t%10; 5   3   5

            s=s*10+r; 5   53   535

             t=t/10;   53   5   0

 121:-   r=t%10; 1   2   1

           s=s*10+r; 1 12 121

           t=t/10;   12 1 0

123: -   r=t%10; 3   2   1

        s=s*10+r; 3 32 321

        t=t/10; 12   1   0

9.ASSIGNMENT TO PRINT FIBONACCI SERIES

```java
package personalprojects;

import java.util.Scanner;

public class FibonacciSeries
{
public static void main(String[] args)
{
    int a=0,b=1,i=0,c;
    Scanner s=new Scanner(System.in);
    System.out.print("Enter The Range:-");
    int n=s.nextInt();//Scan The Range.
    s.close();
    System.out.print("Fibonacci Series:");
    System.out.print(a+" ");
    System.out.print(b);
    while(i<=n)
    {
        c=a+b;//Add The value of A+B.
        a=b;//Swap The Value Of B in A.
        b=c;//Swap The Value of C in B
        i++;
    System.out.print(" "+c);//Print The Value Of C.
    }

}
}
```

OUTPUT:-

```
Enter The Range:-5
Fibonacci Series:0 1 1 2 3 5 8 13
```

10.ASSIGNMENT TO PRINT NATURAL NUMBERS

```java
package personalprojects;

import java.util.Scanner;

public class NaturalNumbers
```

```java
{
public static void main(String[] args)
{
        Scanner s=new Scanner(System.in);
        System.out.print("Enter The Range:");
        int n=s.nextInt();//Scan The Input Range.
        s.close();
        System.out.print("Natural Numbers Are:");
        int i=1;//Intialize The Value Of I.
        while(i<=n)
        {
                System.out.print(i+" ");//Print The Value Of I.
                i++;
        }

}
}
```

OUTPUT:-

```
Enter The Range:10
Natural Numbers Are:1 2 3 4 5 6 7 8 9 10
```