

Assignment -1

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Branch : MCA

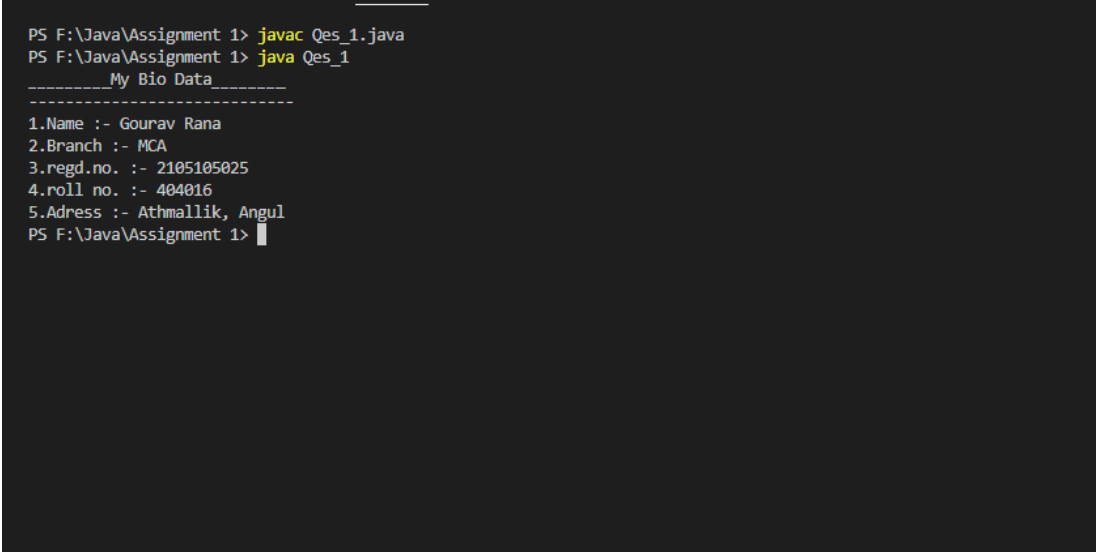
Subject : Programing using JAVA

Semester : 3

Program 1

//1. Write a java program to print your biodata

```
public class Qes_1 {  
    public static void main(String[] args) {  
        System.out.println("_____ My Bio Data _____");  
        System.out.println("-----");  
        System.out.println("1.Name :- Gourav Rana");  
        System.out.println("2.Branch :- MCA");  
        System.out.println("3.regd.no. :- 2105105025");  
        System.out.println("4.roll no. :- 404016");  
        System.out.println("5.Adress :- Athmallik, Angul");  
    }  
}
```



```
PS F:\Java\Assignment 1> javac Qes_1.java  
PS F:\Java\Assignment 1> java Qes_1  
_____ My Bio Data _____  
-----  
1.Name :- Gourav Rana  
2.Branch :- MCA  
3.regd.no. :- 2105105025  
4.roll no. :- 404016  
5.Adress :- Athmallik, Angul  
PS F:\Java\Assignment 1> |
```

Program 2

//2. Write a java program to find simple interest.

```
public class Qes_2 {  
    public static void main(String[] args) {  
        int p=10000;  
        int r=10;  
        int t=3;  
        int i;  
        System.out.println("The principal amount is : "+p);  
        System.out.println("Rate of interest is : "+r);  
        System.out.println("The time period is : "+t);  
        i=p*t*r/100;  
        System.out.println("=====");  
        System.out.println("simple interest is : "+i);  
    }  
}
```



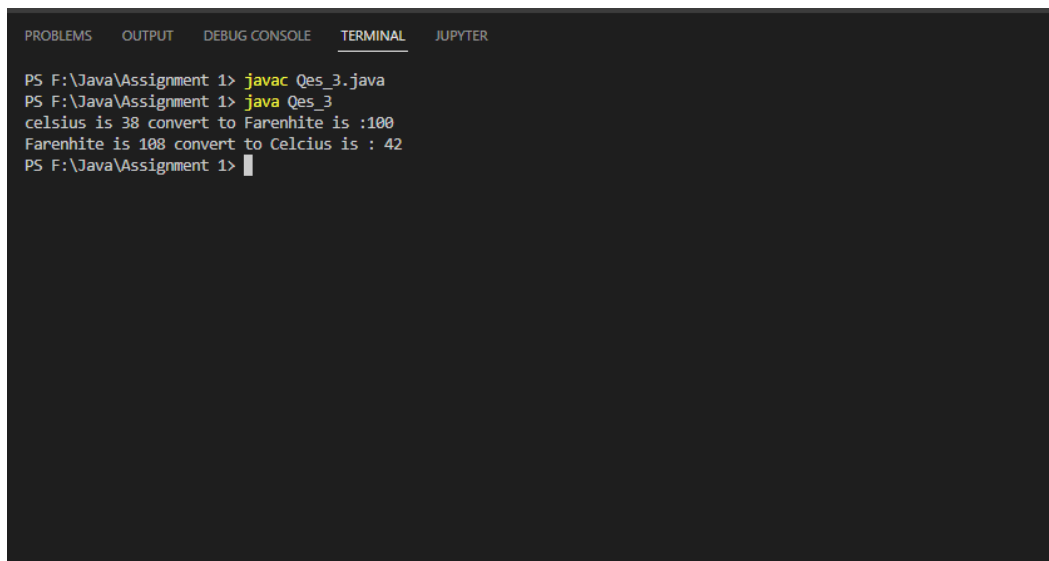
The screenshot shows a terminal window with the following content:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  JUPYTER  
  
PS F:\Java\Assignment 1> javac Qes_2.java  
PS F:\Java\Assignment 1> java Qes_2  
The principal amount is : 10000  
Rate of interest is : 10  
The time period is : 3  
=====  
simple interest is : 3000  
PS F:\Java\Assignment 1> |
```

Program 3

//3. Write a java program for temperature conversion

```
public class Qes_3 {  
    public static void main(String[] args) {  
        int c = 38;  
        int new_f = ((c * 9) / 5) + 32;  
        System.out.println("Celsius is " + c + " convert to Fahrenheit is : " + new_f);  
        int f = 108;  
        int new_c = ((f - 32) * 5) / 9;  
        System.out.println("Fahrenheit is " + f + " convert to Celsius is : " + new_c);  
    }  
}
```



The screenshot shows a terminal window with the following content:

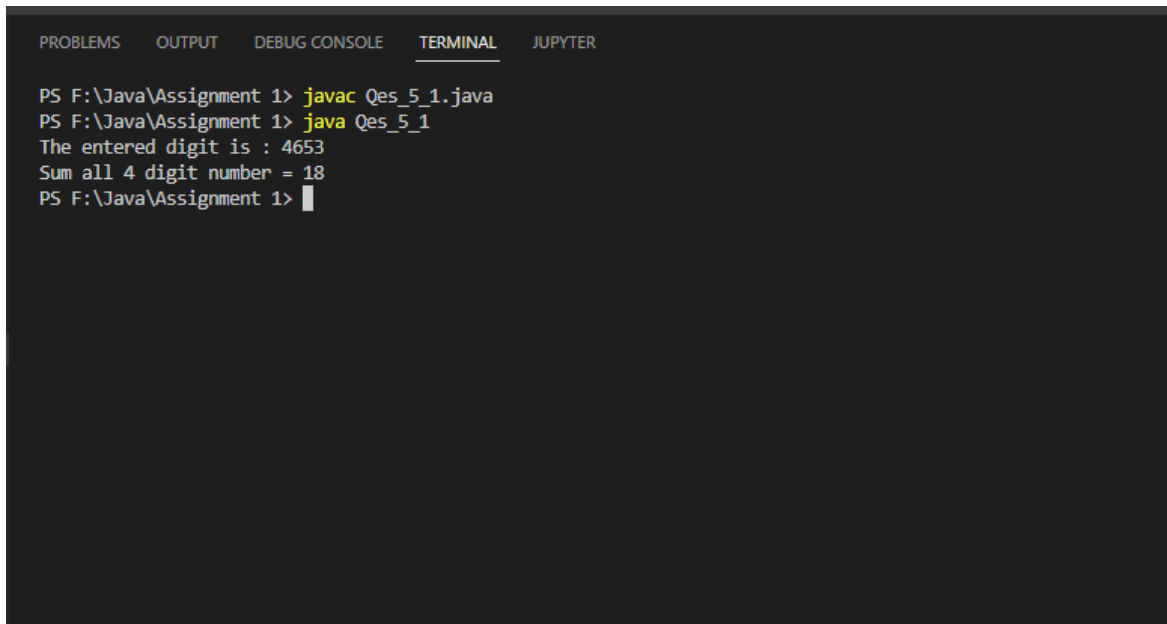
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  JUPYTER  
PS F:\Java\Assignment 1> javac Qes_3.java  
PS F:\Java\Assignment 1> java Qes_3  
celsius is 38 convert to Farenhite is :100  
Farenhite is 108 convert to Celcius is : 42  
PS F:\Java\Assignment 1> |
```

The terminal output demonstrates that the program was successfully compiled and executed. It shows the conversion of 38 Celsius to 100 Fahrenheit and 108 Fahrenheit to 42 Celsius.

Program 5.1

//5.1 Sum of all digits of any 4 digit numbers

```
public class Qes_5_1 {  
    public static void main(String[] args) {  
        int sum=0;  
        int x=4653;  
        System.out.println("The entered digit is : "+x);  
        sum=sum+(x%10)+(x/10)%10+(x/100)%10+(x/1000)%1000;  
        System.out.println("Sum all 4 digit number = "+sum);  
    }  
}
```



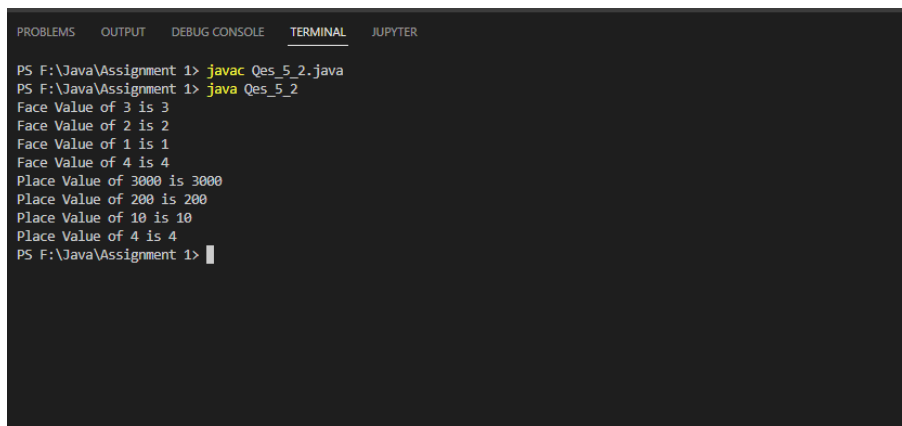
The screenshot shows a terminal window with the following content:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  JUPYTER  
  
PS F:\Java\Assignment 1> javac Qes_5_1.java  
PS F:\Java\Assignment 1> java Qes_5_1  
The entered digit is : 4653  
Sum all 4 digit number = 18  
PS F:\Java\Assignment 1> |
```

Program 5.2

//find the face value and position value of any 4 digit number

```
public class Qes_5_2 {  
    public static void main(String[] args) {  
        int num=3214;  
        int num1,num2,num3,num4;  
        num1=num/1000;num=num%1000;  
        num2=num/100;num=num%100;  
        num3=num/10;num=num%10;  
        num4=num;  
        System.out.println("Face Value of "+num1+" is "+num1);  
        System.out.println("Face Value of "+num2+" is "+num2);  
        System.out.println("Face Value of "+num3+" is "+num3);  
        System.out.println("Face Value of "+num4+" is "+num4);  
        num=3214;  
        num1=num/1000;num=num%1000;num1=num1*1000;  
        num2=num/100;num=num%100;num2=num2*100;  
        num3=num/10;num=num%10;num3=num3*10;  
        num4=num;  
        System.out.println("Place Value of "+num1+" is "+num1);  
        System.out.println("Place Value of "+num2+" is "+num2);  
        System.out.println("Place Value of "+num3+" is "+num3);  
        System.out.println("Place Value of "+num4+" is "+num4);  
    }  
}
```



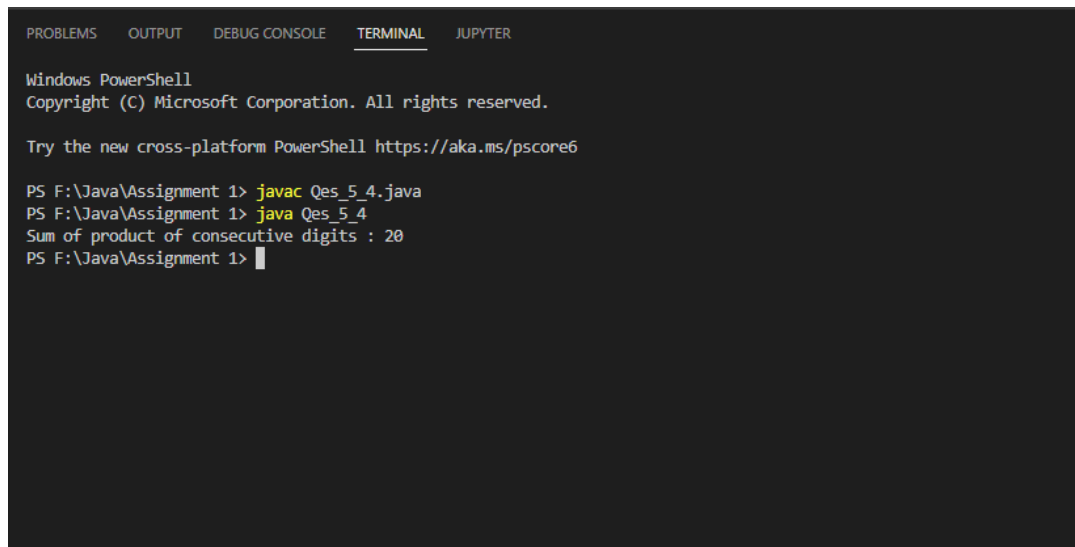
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  JUPYTER  
PS F:\Java\Assignment 1> javac Qes_5_2.java  
PS F:\Java\Assignment 1> java Qes_5_2  
Face Value of 3 is 3  
Face Value of 2 is 2  
Face Value of 1 is 1  
Face Value of 4 is 4  
Place Value of 3000 is 3000  
Place Value of 200 is 200  
Place Value of 10 is 10  
Place Value of 4 is 4  
PS F:\Java\Assignment 1> |
```

Program 5.4

/*Sum of product of consecutive digits of any 4 digit number? Suppose

num=1234 then output= 4*3+3*2+2*1 */

```
public class Qes_5_4 {  
    public static void main(String[] args) {  
        int num=1234;  
        int sop=0;//sop :sum of Product  
        sop=((num %10)*((num/10)%10))+  
        (((num/10)%10)*((num/100)%10))+(((num/100)%10)*((num/1000)%10));  
        System.out.println("Sum of product of consecutive digits : "+sop);  
    }  
}
```



The screenshot shows a Windows PowerShell terminal window with the following content:

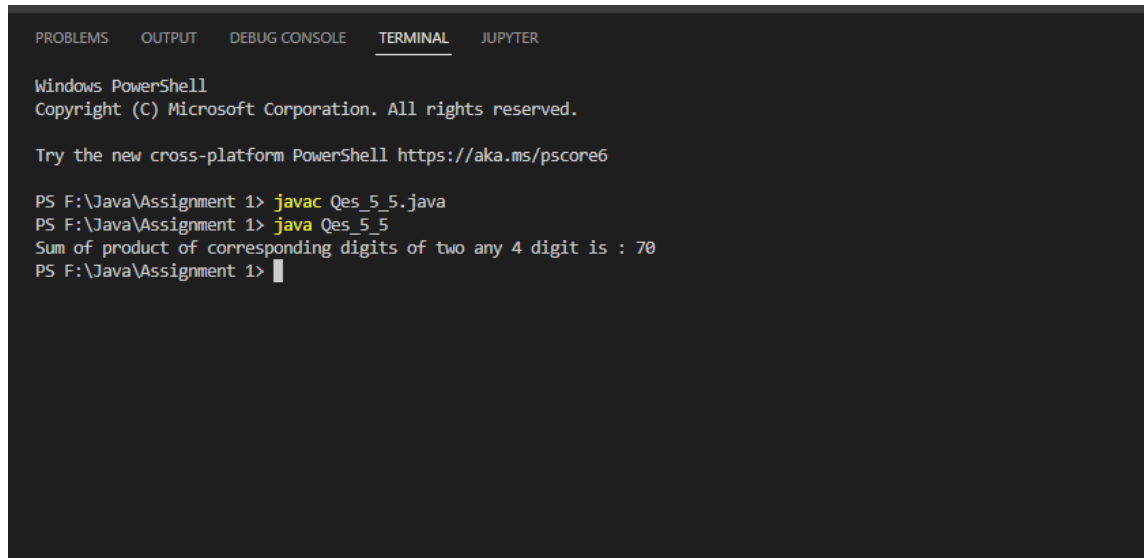
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  JUPYTER  
  
Windows PowerShell  
Copyright (C) Microsoft Corporation. All rights reserved.  
  
Try the new cross-platform PowerShell https://aka.ms/pscore6  
  
PS F:\Java\Assignment 1> javac Qes_5_4.java  
PS F:\Java\Assignment 1> java Qes_5_4  
Sum of product of consecutive digits : 20  
PS F:\Java\Assignment 1> |
```

Program 5.5

//find sum of product of corresponding digits of two any 4 digit

//number Such as n=1234 m=7896 output=6*4+9*3+8*2+7*1

```
public class Qes_5_5 {  
    public static void main(String[] args) {  
        int n=1234;  
        int m=5678;  
        int sum=0;  
        sum=((m%10)*(n%10))+((m/10)%10)*((n/10)%10)+((m/100)%10)*((n/100)%10)+((m/1000)%10)*((n/1000)%10);  
        System.out.println("Sum of product of corresponding digits of two any 4 digit is : "+sum);  
    }  
}
```

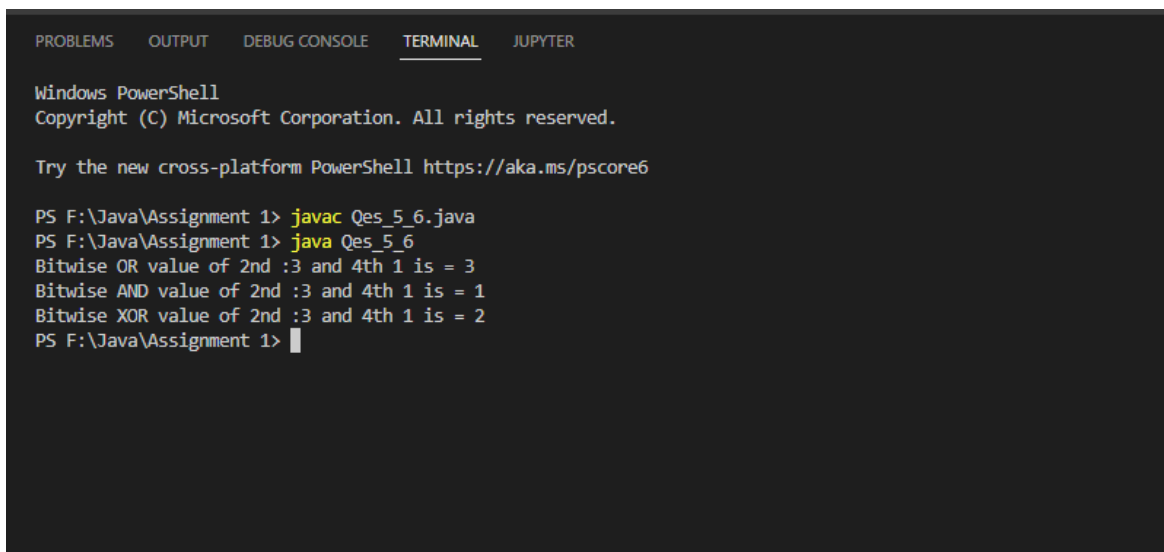


```
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Windows PowerShell  
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PS F:\Java\Assignment 1> javac Qes_5_5.java  
PS F:\Java\Assignment 1> java Qes_5_5  
Sum of product of corresponding digits of two any 4 digit is : 70  
PS F:\Java\Assignment 1> |
```


Program 5.6

//find bitwise and , or , and xor of 2nd and 4th digit of any 4 digit number

```
public class Qes_5_6 {  
    public static void main(String[] args) {  
        int num=1234;  
        int m,n,temp;  
        m=((num/10)%10);  
        n=((num/1000)%10);  
        temp=m|n;  
        System.out.println("Bitwise OR value of 2nd :"+m+" and"+" 4th "+n+" is = "+temp);  
        temp=m&n;  
        System.out.println("Bitwise AND value of 2nd :"+m+" and"+" 4th "+n+" is = "+temp);  
        temp=m^n;  
        System.out.println("Bitwise XOR value of 2nd :"+m+" and"+" 4th "+n+" is = "+temp);  
    }  
}
```

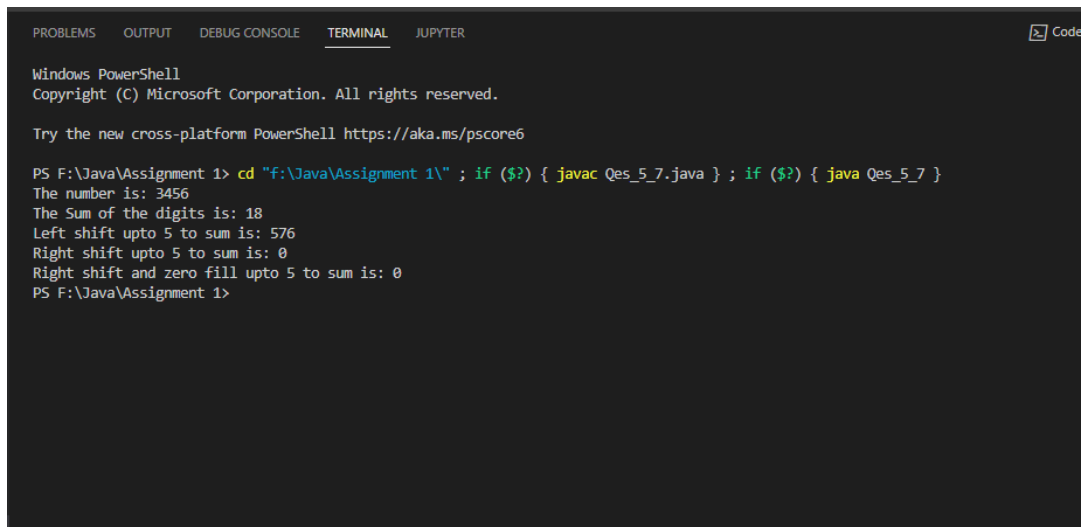


```
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Windows PowerShell  
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PS F:\Java\Assignment 1> javac Qes_5_6.java  
PS F:\Java\Assignment 1> java Qes_5_6  
Bitwise OR value of 2nd :3 and 4th 1 is = 3  
Bitwise AND value of 2nd :3 and 4th 1 is = 1  
Bitwise XOR value of 2nd :3 and 4th 1 is = 2  
PS F:\Java\Assignment 1> |
```

Program 5.7

/*Find left shift, right shift and zero fill of summation of all digits of any 4 digit number and it will be shifted by 3rd digit of any 4 digit number */

```
public class Qes_5_7 {  
    public static void main(String[] args) {  
        int sum,num,d1,d2,d3,d4;  
        num=3456;  
        d1 = num / 1000;  
        d2 = num / 100 % 10;  
        d3 = num / 10 % 10;  
        d4 = num % 10;  
  
        sum = d1 + d2 + d3 + d4;  
  
        System.out.println("The number is: " + num);  
        System.out.println("The Sum of the digits is: " + sum);  
        System.out.println("Left shift upto " + d3 + " to sum is: " + (sum << d3));  
        System.out.println("Right shift upto " + d3 + " to sum is: " + (sum >> d3));  
        System.out.println("Right shift and zero fill upto " + d3 + " to sum is: " + (sum >>> d3));  
    }  
}
```

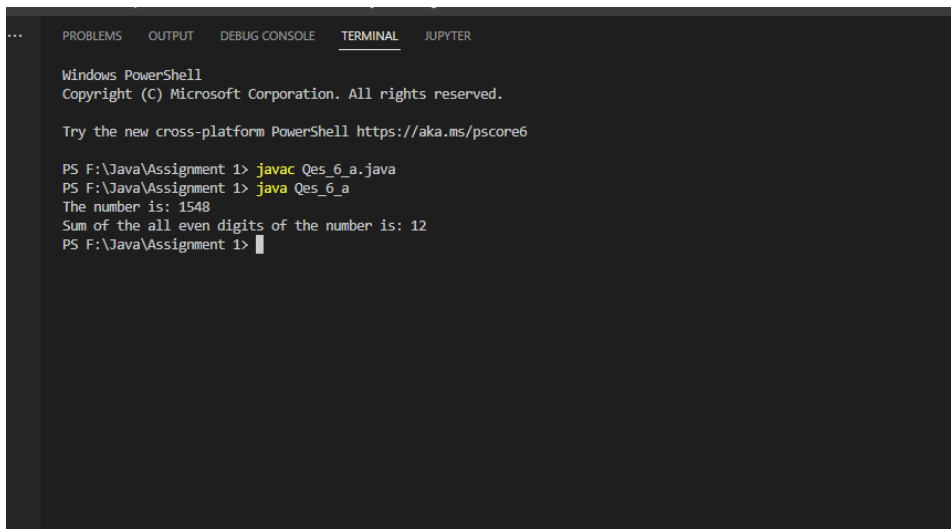


```
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Windows PowerShell  
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PS F:\Java\Assignment 1> cd "f:\Java\Assignment 1\" ; if ($?) { javac Qes_5_7.java } ; if ($?) { java Qes_5_7 }  
The number is: 3456  
The Sum of the digits is: 18  
Left shift upto 5 to sum is: 576  
Right shift upto 5 to sum is: 0  
Right shift and zero fill upto 5 to sum is: 0  
PS F:\Java\Assignment 1>
```

Program 6.a

/*Sum of all even digits of any 4 digit number */

```
public class Qes_6_a {  
    public static void main(String[] args) {  
        int num, d1, d2, d3, d4;  
        int sum = 0;  
        num = 1548;  
        d1 = num / 1000;  
        d2 = num / 100 % 10;  
        d3 = num / 10 % 10;  
        d4 = num % 10;  
  
        sum = sum+(d1 % 2 == 0 ? d1 : 0);  
        sum = sum +(d2 % 2 == 0 ? d2 : 0);  
        sum = sum +(d3 % 2 == 0 ? d3 : 0);  
        sum = sum +(d4 % 2 == 0 ? d4 : 0);  
        System.out.println("The number is: "+num);  
        System.out.println("Sum of the all even digits of the number is: "+sum);  
    }  
}
```

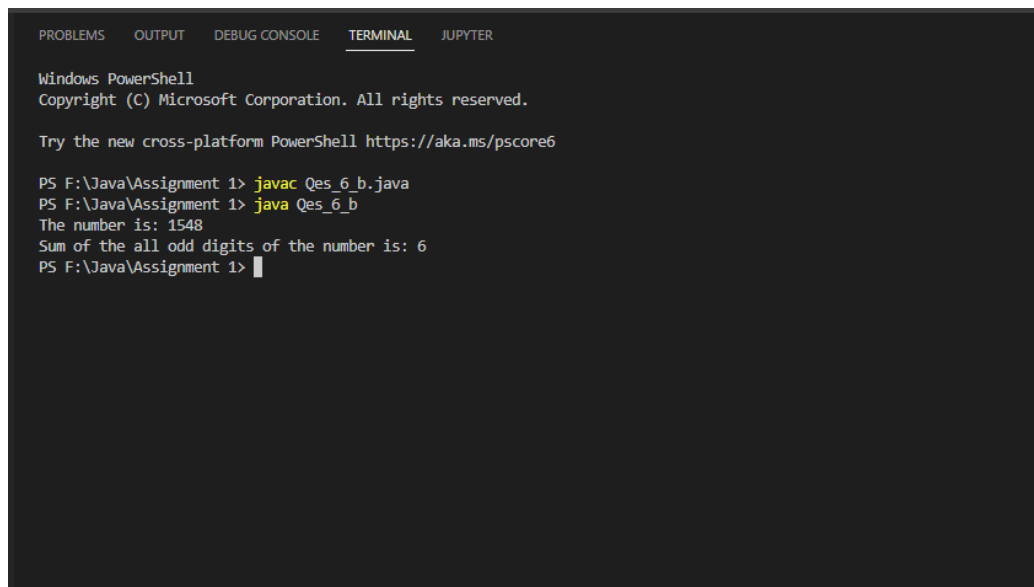


```
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Windows PowerShell  
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PS F:\Java\Assignment 1> javac Qes_6_a.java  
PS F:\Java\Assignment 1> java Qes_6_a  
The number is: 1548  
Sum of the all even digits of the number is: 12  
PS F:\Java\Assignment 1> 
```

Program 6.b

/*Sum of all odd digits of any 4 digit number */

```
public class Qes_6_b {  
    public static void main(String[] args) {  
        int num, d1, d2, d3, d4;  
        int sum = 0;  
        num = 1548;  
        d1 = num / 1000;  
        d2 = num / 100 % 10;  
        d3 = num / 10 % 10;  
        d4 = num % 10;  
        sum = sum+(d1 % 2 != 0 ? d1 : 0);  
        sum = sum +(d2 % 2 != 0 ? d2 : 0);  
        sum = sum +(d3 % 2 != 0 ? d3 : 0);  
        sum = sum +(d4 % 2 != 0 ? d4 : 0);  
        System.out.println("The number is: "+num);  
        System.out.println("Sum of the all odd digits of the number is: "+sum);  
    }  
}
```



```
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Windows PowerShell  
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PS F:\Java\Assignment 1> javac Qes_6_b.java  
PS F:\Java\Assignment 1> java Qes_6_b  
The number is: 1548  
Sum of the all odd digits of the number is: 6  
PS F:\Java\Assignment 1> █
```

Program 6.c

```
/*
* Difference between average of all even digits except divisible by 4 and
* average of all odd digits except divisible by 3 of any 4 digit number
*/
import java.util.Scanner;

public class Qes_6_c {
    public static void main(String[] args) {
        int num,d1,d2,d3,d4;

        System.out.println("Enter a 4 digit number : ");

        Scanner sc=new Scanner(System.in);

        num=sc.nextInt();

        sc.close();

        int avgEvenCount=0,avgOddCount=0;

        float diff,avgEven=0,avgOdd=0;

        d1=num/1000;

        d2=num/100%10;

        d3=num/10%10;

        d4=num%10;

        //Average of all even digits except divisible by 4
        avgEven = avgEven+((d1%2==0)&&(d1%4 !=0)? d1:0);
        avgEvenCount=avgEvenCount +((d1%2==0)&&(d1%4 !=0) ? 1:0);

        avgEven = avgEven+((d2%2==0)&&(d2%4 !=0)? d2:0);
        avgEvenCount=avgEvenCount +((d2%2==0)&&(d2%4 !=0) ? 1:0);

        avgEven = avgEven+((d3%2==0)&&(d3%4 !=0)? d3:0);
        avgEvenCount=avgEvenCount +((d3%3==0)&&(d3%3 !=0) ? 1:0);
```

```
avgEven = avgEven+((d4%2==0)&&(d4%4 !=0)? d4:0);
avgEvenCount=avgEvenCount +((d4%2==0)&&(d4%4 !=0) ? 1:0);
//Average of all odd digits except divisible by 3
avgOdd = avgOdd +((d1%2!=0)&&(d1%3!=0)? d1:0);
avgOddCount=avgOddCount +((d1%2!=0)&&(d1%3!=0)? 1:0);

avgOdd = avgOdd +((d2%2!=0)&&(d2%3!=0)? d2:0);
avgOddCount=avgOddCount +((d2%2!=0)&&(d2%3!=0)? 1:0);

avgOdd = avgOdd +((d3%2!=0)&&(d3%3!=0)? d3:0);
avgOddCount=avgOddCount +((d3%2!=0)&&(d3%3!=0)? 1:0);

avgOdd = avgOdd +((d4%2!=0)&&(d4%3!=0)? d4:0);
avgOddCount=avgOddCount +((d4%2!=0)&&(d4%3!=0)? 1:0);

avgEven=avgEven/avgEvenCount;
avgOdd=avgOdd/avgOddCount;

diff=avgEven-avgOdd;

System.out.println("Entered number is : "+num);

System.out.println("thee difference is : "+diff);

}

}
```



```
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Windows PowerShell
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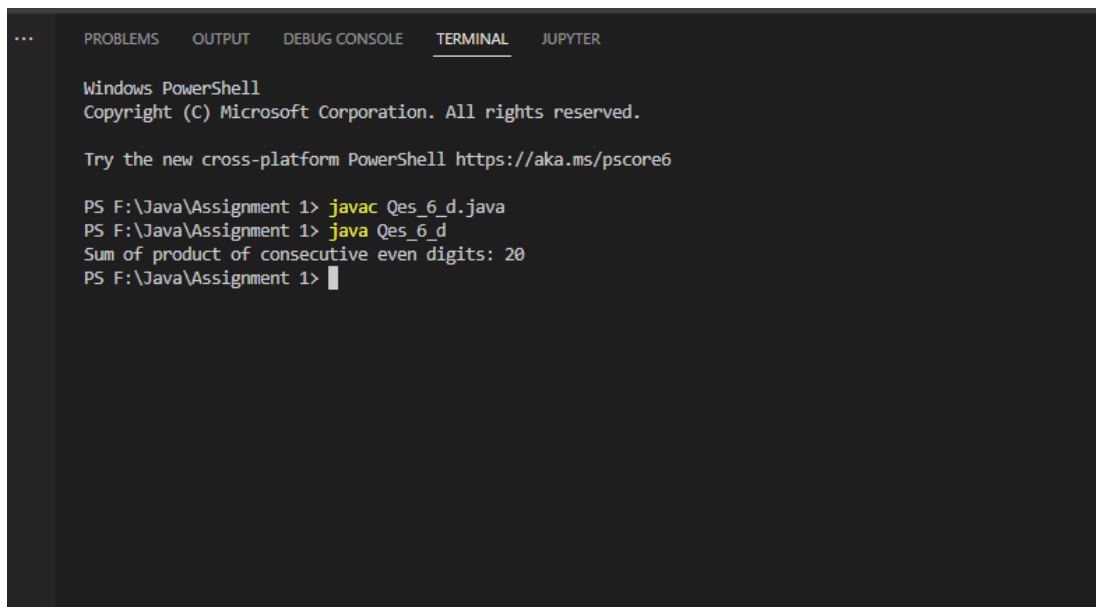
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PS F:\Java\Assignment 1> javac Qes_6_c.java
PS F:\Java\Assignment 1> java Qes_6_c
Enter a 4 digit number :
5762
Entered number is : 5762
thee difference is : 2.0
PS F:\Java\Assignment 1> |
```

Program 6.d

/*Sum of product of consecutive even digits of any 4 digit number? Suppose num=1624 then output= 4*2+2*6 */

```
public class Qes_6_d {  
    public static void main(String[] args) {  
        int num, sum;  
        int d1, d2, d3, d4;  
        num = 1624;  
        sum = 0;  
        d1 = num / 1000;  
        d2 = num / 100 % 10;  
        d3 = num / 10 % 10;  
        d4 = num % 10;  
        sum = sum + ((d1 % 2 == 0 && d2 % 2 == 0) ? d1 * d2 : 0);  
        sum = sum + ((d2 % 2 == 0 && d3 % 2 == 0) ? d2 * d3 : 0);  
        sum = sum + ((d3 % 2 == 0 && d4 % 2 == 0) ? d3 * d4 : 0);  
        System.out.println("Sum of product of consecutive even digits: "+sum);  
    }  
}
```



```
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PS F:\Java\Assignment 1> javac Qes_6_d.java  
PS F:\Java\Assignment 1> java Qes_6_d  
Sum of product of consecutive even digits: 20  
PS F:\Java\Assignment 1> |
```

Program 6.e

/* Sum of product of consecutive odd digits of any 4 digit number? Suppose

num=1356 then output= 5*3+ 3*1

***/**

```
public class Qes_6_e {
```

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

```
        int num, sum;
```

```
        int d1, d2, d3, d4;
```

```
        num = 1356;
```

```
        sum = 0;
```

```
        d1 = num / 1000;
```

```
        d2 = num / 100 % 10;
```

```
        d3 = num / 10 % 10;
```

```
        d4 = num % 10;
```

```
        sum =sum+ ((d1 % 2 != 0 && d2 % 2 != 0 ) ? d1 * d2 : 0);
```

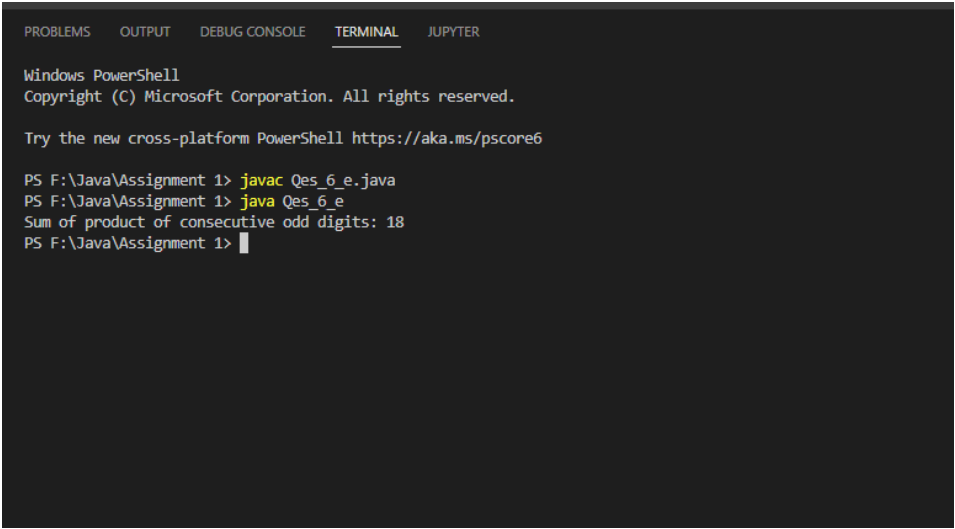
```
        sum = sum + ((d2 % 2 != 0 && d3 % 2 != 0 ) ? d2 * d3 : 0);
```

```
        sum = sum +((d3 % 2 != 0 && d4 % 2 != 0 ) ? d3 * d4 : 0);
```

```
        System.out.println("Sum of product of consecutive odd digits: "+sum);
```

```
    }
```

```
}
```



```
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PS F:\Java\Assignment 1> javac Qes_6_e.java
PS F:\Java\Assignment 1> java Qes_6_e
Sum of product of consecutive odd digits: 18
PS F:\Java\Assignment 1>
```


Program 6.f

/* Difference between Sum of product of consecutive even digits except 2 and 6 and Sum of product of consecutive odd digits except 3 and 7 of any 4 digit number */

```
import java.util.*;
public class Qes_6_f {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int num, d1, d2, d3, d4, sumOdd, sumEven, diff;

        System.out.println("Enter the 4 digit Number: ");
        num = sc.nextInt();

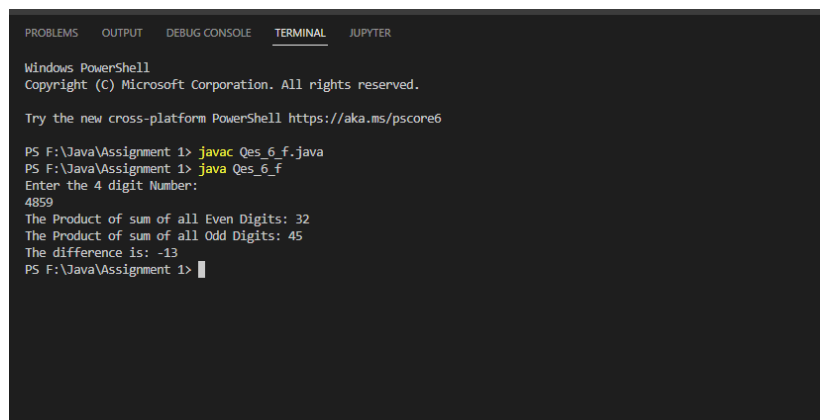
        diff = 0;
        sumOdd = 0;
        sumEven = 0;

        d1 = num / 1000;
        d2 = num / 100 % 10;
        d3 = num / 10 % 10;
        d4 = num % 10;

        sumEven += ( d1 % 2 == 0 && d1 != 2 && d1 != 6 ) && ( d2 % 2 == 0 && d2 != 2 && d2 != 6 ) ? d1 * d2 : 0;
        sumEven += ( d2 % 2 == 0 && d2 != 2 && d2 != 6 ) && ( d3 % 2 == 0 && d3 != 2 && d3 != 6 ) ? d2 * d3 : 0;
        sumEven += ( d3 % 2 == 0 && d3 != 2 && d3 != 6 ) && ( d4 % 2 == 0 && d4 != 2 && d4 != 6 ) ? d3 * d4 : 0;

        sumOdd += ( d1 % 2 != 0 && d1 != 3 && d1 != 7 ) && ( d2 % 2 != 0 && d2 != 3 && d2 != 7 ) ? d1 * d2 : 0;
        sumOdd += ( d2 % 2 != 0 && d2 != 3 && d2 != 7 ) && ( d3 % 2 != 0 && d3 != 3 && d3 != 7 ) ? d2 * d3 : 0;
        sumOdd += ( d3 % 2 != 0 && d3 != 3 && d3 != 7 ) && ( d4 % 2 != 0 && d4 != 3 && d4 != 7 ) ? d3 * d4 : 0;

        diff = sumEven - sumOdd;
        System.out.println("The Product of sum of all Even Digits: "+sumEven);
        System.out.println("The Product of sum of all Odd Digits: "+sumOdd);
        System.out.println("The difference is: "+diff);
        sc.close();
    }
}
```



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  JUPYTER

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PS F:\Java\Assignment 1> javac Qes_6_f.java
PS F:\Java\Assignment 1> java Qes_6_f
Enter the 4 digit Number:
4859
The Product of sum of all Even Digits: 32
The Product of sum of all Odd Digits: 45
The difference is: -13
PS F:\Java\Assignment 1> 
```

Program 6.g

**/* Write a java program to find sum of product of corresponding even digits of first any digit number and corresponding odd digit of any 4 digit number Such as n=1234 m=4567
output=4*7+2*5 */**

```
import java.util.Scanner;

public class Qes_6_g {

    public static void main(String[] args) {

        Scanner sc=new Scanner(System.in);

        int n,m,n1,n2,n3,n4,m1,m2,m4,m3;

        int sum;

        System.out.println("Enter first 4 digit number : ");

        n=sc.nextInt();

        System.out.println("Enter second 4 digit number : ");

        m=sc.nextInt();

        sum=0;

        n1=n/1000;

        n2=n/100 % 10;

        n3=n/10 % 10;

        n4=n%10;

        m1=m/1000;

        m2=m/100 %10;

        m3=m/10 %10;

        m4=m %10;

        sum += (n1 %2 == 0) && (m1 %2 != 0) ? n1 * m1 : 0;

        sum += (n2 %2 == 0) && (m2 %2 != 0) ? n2 * m2 : 0;

        sum += (n3 %2 == 0) && (m3 %2 != 0) ? n3 * m3 : 0;

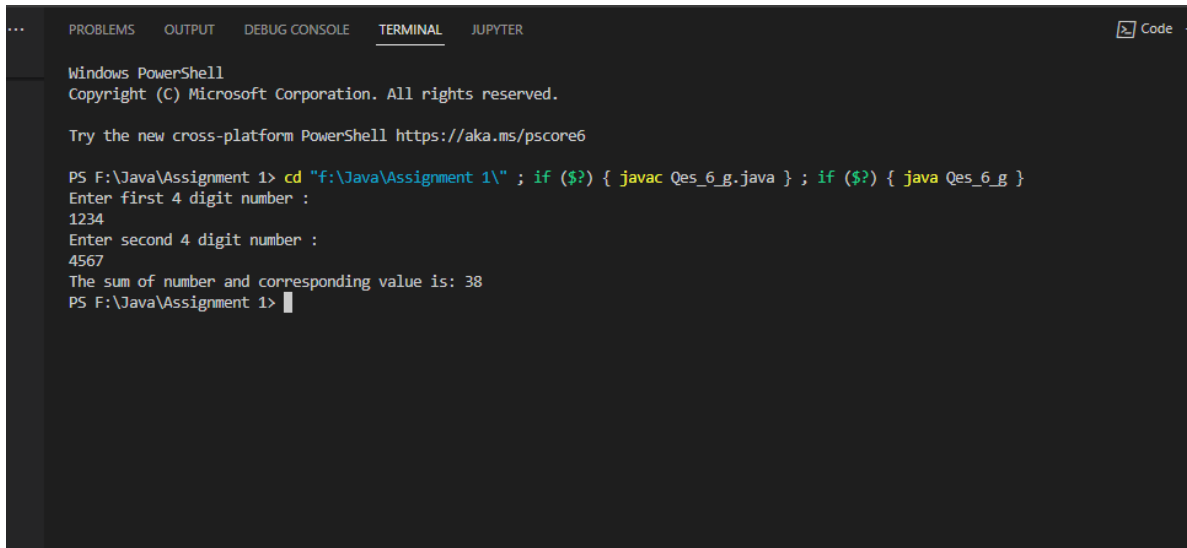
        sum += (n4 %2 == 0) && (m4 %2 != 0) ? n4 * m4 : 0;

        System.out.println("The sum of number and corresponding value is: "+sum);

    }

}
```

```
sc.close();  
}  
}
```



The screenshot shows a Windows PowerShell terminal window with the following content:

```
Windows PowerShell  
Copyright (c) Microsoft Corporation. All rights reserved.  
  
Try the new cross-platform PowerShell https://aka.ms/pscore6  
  
PS F:\Java\Assignment 1> cd "f:\Java\Assignment 1\" ; if ($?) { javac Qes_6_g.java } ; if ($?) { java Qes_6_g }  
Enter first 4 digit number :  
1234  
Enter second 4 digit number :  
4567  
The sum of number and corresponding value is: 38  
PS F:\Java\Assignment 1> |
```