

```
1 /*program 1
2 1. Create a class Market and define a function Costing() to input details of a
   product as, Product code(pc), Qty (qty) and Price of product(pr). Calculate the
   total cost of the product, 12.5% discount on total cost and net price to be paid
   after the discount/ print all the details of the product.*/
3 import java.util.*;
4
5 class Market
6 {
7     void Costing()
8     {
9         int pc, qty;
10        double pr;
11        Scanner sc = new Scanner(System.in);
12        System.out.println("Enter Product Code: ");
13        pc = sc.nextInt();
14
15        System.out.println("Enter Quantity: ");
16        qty = sc.nextInt();
17
18        System.out.println("Price Of Product: ");
19        pr = sc.nextInt();
20
21        double tc = qty * pr;
22        double discount = 12.5/100 * tc;
23        double netPrice = tc - discount;
24
25        System.out.println("Product Code: " + pc);
26        System.out.println("Quantity: " + qty);
27        System.out.println("Total cost: " + tc);
28        System.out.println("Discount: " + discount);
29        System.out.println("Net Price: " + netPrice);
30
31    }
32 }
```

```
1 /*
2 2. Create a class OFFICE and define a function Salary() to input the employee code
   (EC), monthly salary(SAL). Calculate 12.5% special allowances(spl) on salary. Also
   calculate the total monthly salary (sal + spl) and the annual salary of the
   employee. Print all the details.
3 */
4 import java.util.*;
5
6 class OFFICE
7 {
8     void Salary()
9     {
10         int EC;
11         double SAL, spl;
12
13         Scanner sc = new Scanner(System.in);
14         System.out.println("Enter Employee code, monthly salary ");
15         EC = sc.nextInt();
16         SAL = sc.nextDouble();
17         spl = 12.5/100 * SAL;
18         double tms = SAL + spl; //total monthly salary
19         double tas = tms * 12; //total annual salary
20         System.out.println("Employee Code: " + EC);
21         System.out.println("Monthly Salary: " + tms);
22         System.out.println("Annual Salary: " + tas);
23
24     }
25 }
26 }
```

```
1 /*3. Write a program to initialise a four digit number of long integer type. Print
2 the last and last two digits of the number*/
3 class a
4 {
5     void main()
6     {
7         int n=1267;
8
9         System.out.println("Last Digit: " + n % 10);
10        System.out.println("Last Two digits: "+ n % 100);
11    }
12
13 }
```

```
1 /* 4. Write a program to input a long integer number. Print the product of the last
two digits of the number. Assume that the input number contains three or more
digits.*/
2 import java.util.*;
3 class p4
4 {
5     void main()
6     {
7         Scanner sc = new Scanner(System.in);
8         System.out.println("Enter a number: ");
9         int n = sc.nextInt();
10
11         int ld = n % 10;
12         n = n/10;
13         int ld2 = n%10;
14         System.out.println("Product Of Last 2 Digits: " + (ld * ld2));
15     }
16 }
17
18
```

```
1 // 5. Write a program to print the first character of a city name input by the user
  and also the next character in the consecutive sequence.
2 // For example: If input : Kerala the output will be K and L
3 import java.util.*;
4 class p5
5 {
6     void main()
7     {
8         Scanner sc = new Scanner(System.in);
9         System.out.println("Enter a string: ");
10        String s = sc.nextLine();
11        char ch = s.charAt(0);
12        System.out.println(ch + " and " + ++ch);
13    }
14 }
15 }
```

```
1 /* 6. Write a program to input a character. Check and print whether the input
2 character is an uppercase letter, lowercase letter, a digit or any other letter. */
3 import java.util.*;
4 class p6
5 {
6     void main()
7     {
8         Scanner sc = new Scanner(System.in);
9         System.out.println("Enter a string: ");
10        char ch = sc.next().charAt(0);
11
12        if(ch >= 'A' && ch <= 'Z')
13            System.out.println(ch + " is an uppercase letter");
14        else if(ch >= 'a' && ch <= 'z')
15            System.out.println(ch + " is a lowercase letter");
16        else if(ch >= '0' && ch <= '9')
17            System.out.println(ch + " is a digit");
18        else
19            System.out.println(ch + " is some other character");
20
21    }
22 }
23 }
```

```
1 /*7. Write a program to input a character. Convert the character into its opposite
2 case(uppercase to lowercase and vice-versa). Print the original and the new
3 character. */
4 import java.util.*;
5 class p6
6 {
7     void main()
8     {
9         Scanner sc = new Scanner(System.in);
10        System.out.println("Enter a string: ");
11        char ch = sc.next().charAt(0);
12
13        if(ch >= 'A' && ch <= 'Z')
14            ch += 32;
15        else if(ch >= 'a' && ch <= 'z')
16            ch -= 32;
17
18    }
19 }
```

```

1 /*8. An electrical company calculates monthly electricity bill as per the given
2 criteria:
3 Number of units consumed      Rate per unit (₹)
4 first 100 units                only meter rent ₹ 150 /-
5 for next 100 units             ₹1.00 per unit + meter rent
6 for next 100 units             ₹1.20 per unit + meter rent
7 for more than 300 units        ₹1.50 per unit + meter rent
8
9
10 Write a program to input meter number(long integer) and number of units
11 consumed(integer). Calculate the bill amount to be paid. Print the meter number and
12 bill amount.*/
13
14 import java.util.*;
15 class slab_1
16 {
17     public static void main()
18     {
19         Scanner j= new Scanner(System.in);
20         double a,b,c;
21         System.out.println("enter the total electricity units");
22         a = j.nextDouble();
23
24         if(a <= 100)
25         {
26             b = 0;
27         }
28         else if(a <= 200)
29         {
30             b=(100*0)+((a-100) * 1);
31         }
32         else if(a <= 300)
33         {
34             b=(100*0)+(100*1)+((a-200)*1.2);
35         }
36         else
37         {
38             b=(100*0)+(100*1)+(100*1.2)+((a-300)*1.5);
39         }
40
41         c = b + 150;
42         System.out.println("Total bill: " + c);
43     }
44 }

```



1 /\*9. A cloth factory gives commission to salesman as per the given criteria:

2

3 Sales Amount (₹)                      Rate per unit (₹)

4 upto 15000                              10%

5 15001 - 40000                          15%

6 40001 - 65000                          20%

7 65001 and above                        30%

8

9 Write a program to input salesman salary(in decimals), sales amount(in decimals).  
Compute the commission from the table given above and the total wages (salary +  
commission). Print the salary, sales amount and total wages.\*/  
10

11

```
11 import java.util.*;
```

```
12 class p9
```

```
13 {
```

```
14     public static void main()
```

```
15     {
```

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

```
17         double salary, salesAmt, com=0;
```

```
18         System.out.println("Enter Salary and Sales Amount");
```

```
19         salary = sc.nextDouble();
```

```
20         salesAmt = sc.nextDouble();
```

```
21
```

```
22         if(salesAmt <= 15000)
```

```
23             com = 10.0/100;
```

```
24         else if(salesAmt <= 40000)
```

```
25             com = 15.0/100;
```

```
26         else if(salesAmt <= 65000)
```

```
27             com = 20.0/100;
```

```
28         else
```

```
29             com = 30.0/100;
```

```
30
```

```
31         com = com * salesAmt;
```

```
32         double tw = salary + com;
```

```
33         System.out.println("Salary: " + salary);
```

```
34         System.out.println("Sales Amount: " + salesAmt);
```

```
35         System.out.println("Total Wages: " + tw);
```

```
36     }
```

```
37 }
```

```
1 /*10. Write a program to input an integer number. Check and print whether it is a
2 single-digit integer, double-digit integer or three-digit integer. Print an error
3 message "Out of range" otherwise.
4 */
5 import java.util.*;
6 class p9
7 {
8     public static void main()
9     {
10         Scanner sc = new Scanner(System.in);
11         int n = sc.nextInt();
12
13         if(n>0 && n<9)
14             System.out.println("Single digit");
15         else if(n>10 && n<99)
16             System.out.println("Double digit");
17         else if(n>100 && n<999)
18             System.out.println("Triple digit");
19         else
20             System.out.println("Out of range");
21     }
22 }
```

```
1 /**11. Write a java program to input a number in 'num' and print all the
2 factors/divisors of 'num' using suitable do-while loop */
3 import java.util.*;
4 class p9
5 {
6     public static void main()
7     {
8         Scanner sc = new Scanner(System.in);
9         int num = sc.nextInt();
10        int i = 1;
11        do
12        {
13            if(num % i == 0)
14                System.out.println(i);
15            i++;
16
17        }while(i<=num);
18    }
19 }
20
```

```
1 /**12. Write a program to calculate and print the first 15 fibonacci numbers in one
line. */
2
3 class p12
4 {
5     void main()
6     {
7         int a = 0, b = 1, c = a + b, i = 3;
8
9         System.out.print(a + "," + b);
10        do
11        {
12            System.out.print("," + c);
13            a=b;
14            b=c;
15            c=a+b;
16            i++;
17        }while(i <= 15);
18    }
19 }
```

```
1 /**13. Write a program to input a number and print whether it is a palindrome number
or not. */
2 import java.util.*;
3 class p13
4 {
5     void main()
6     {
7         Scanner sc = new Scanner(System.in);
8         int n = sc.nextInt();
9         int r,rev=0,temp;
10
11         temp=n;
12         while(n>0)
13         {
14             r = n % 10;
15             rev = (rev*10) + r;
16             n = n/10;
17         }
18         if(temp==rev)
19             System.out.println(n + "is a palindrome number ");
20         else
21             System.out.println(n + "is not a palindrome");
22     }
23 }
24 }
```

```
1 /**14. Write a program to input a num and print whether it is an Armstrong num or
2 not. */
3 import java.util.Scanner;
4 public class p14 {
5     private static Scanner sc;
6
7     public static void main(String[] args) {
8         int num, t, d, nod = 0;
9         double Sum = 0;
10        sc = new Scanner(System.in);
11        System.out.println("\n Please Enter number to Check : ");
12        num = sc.nextInt();
13
14        t = num;
15        while (t != 0) {
16            nod = nod + 1;
17            t = t / 10;
18        }
19
20        t = num;
21        while( t > 0) {
22            d = t %10;
23            Sum = Sum + Math.pow(d, nod);
24            t = t /10;
25        }
26
27
28        if (Sum == num) {
29            System.out.println(num + "is an Armstrong Number" );
30        }
31        else {
32            System.out.println(num + "is not an Armstrong Number");
33        }
34    }
35 }
```

```
1 /**
2  * 15. Write a program to input two integers 'x' and 'y'. Print the HCF and LCM of x
3  * and y.
4  */
5 import java.util.Scanner;
6
7 public class p15{
8     void main()
9     {
10         int dividend, divisor, num1, num2, temp, hcf, lcm;
11         Scanner scan = new Scanner(System.in);
12
13         System.out.print("Enter First Number: ");
14         num1 = scan.nextInt();
15         System.out.print("Enter Second Number: ");
16         num2 = scan.nextInt();
17         scan.close();
18
19         dividend = num1;
20         divisor = num2;
21
22         while(divisor != 0){
23             temp = divisor;
24             divisor = dividend % divisor;
25             dividend = temp;
26         }
27
28         hcf = dividend;
29         lcm = (num1*num2)/hcf;
30
31         System.out.println("HCF of input numbers: "+hcf);
32         System.out.println("LCM of input numbers: "+lcm);
33     }
34 }
```

```
1 /**16. Write a program to input an integer and print product of all the odd digits.
2 */
3 import java.util.Scanner;
4
5 public class p16
6 {
7     void main()
8     {
9         Scanner scan = new Scanner(System.in);
10
11         System.out.print("Enter Number: ");
12         int num = scan.nextInt();
13         int pro = 1;
14         while(num > 0)
15         {
16             int d = num % 10;
17             if(d % 2 != 0)
18             {
19                 pro = pro * d;
20             }
21             num = num/10;
22         }
23         System.out.println("Product of all odd digits: " + pro);
24     }
25 }
26 }
```



```
1 /**
2  * 17. Write a program to input m and n. Print all the prime numbers between m
3  * and n (both inclusive) if m < n, otherwise print a message "Limits out of
4  * range"
5  */
6 import java.util.*;
7 class p17
8 {
9     void main()
10    {
11        Scanner sc = new Scanner(System.in);
12
13        System.out.print("Enter value of m and n: ");
14        int m = sc.nextInt();
15        int n = sc.nextInt();
16
17        for(int i=m; i<=n; i++)
18        {
19            int count = 0;
20            for(int j=1; j<=i; j++)
21            {
22                if(i % j == 0)
23                    count++;
24            }
25            if(count == 2)
26                System.out.println(i);
27        }
28    }
29 }
30 }
```

```

1          /*
2  18. Print the following pattern
3          *
4         ***
5        *****
6       *********
7      *********
8     *********
9    *****
10   ***
11   *
12          */
13
14 public class MyClass {
15     public static void main(String args[]) {
16
17         int space = 4;
18
19         for(int i=1; i<=9; i+=2)
20         {
21             for(int j=1; j<=space; j++)
22                 System.out.print(" ");
23
24             for(int k=1; k<=i; k++)
25                 System.out.print("*");
26             space--;
27             System.out.println();
28         }
29         space=1;
30         for(int i=7; i>=1; i-=2)
31         {
32             for(int j=1; j<=space; j++)
33                 System.out.print(" ");
34
35             for(int k=1; k<=i; k++)
36                 System.out.print("*");
37             space++;
38             System.out.println();
39         }
40     }
41 }

```

```
1
2                                     /*
3 19. Print the following pattern
4
5 * * * * *
6  * * * *
7   * * *
8    * *
9     *
10                                     */
11 class p19
12 {
13     void main()
14     {
15         for(int i=5; i>=1; i--)
16         {
17             for(int k=1; k<=5-i; k++)
18                 System.out.print(" ");
19
20             for(int j=1; j<=i; j++)
21                 System.out.print("* ");
22
23             System.out.println();
24         }
25     }
26 }
27 }
```

```
1 /**20. Write a program to input a number and print whether it's a leap year or not.
   Note: Leap year should be divisible by 400 OR it should not be divisible by 100 but
   divisible by 4. */
2
3 import java.util.Scanner;
4
5 public class p20
6 {
7     void main()
8     {
9         int year;
10        Scanner sc = new Scanner(System.in);
11
12        System.out.println("\n Please Enter any year: ");
13        year = sc.nextInt();
14
15        if (( year % 400 == 0) || (( year%4 == 0 ) &&( year%100 != 0))) {
16            System.out.println(year + " is a leap year");
17        }
18        else {
19            System.out.println(year + " is not a leap year");
20        }
21    }
22 }
```