

Q1. Write a java program to read name, mobile number, 10th percentage, 12th percentage and degree percentage and print in following format:

i/p:

Enter the name: Ramesh

Enter the mobile number: 7653983721

Enter 10th percentage:78.76

Enter 12th percentage:68.56

Enter Degree percentage:68.56

o/p:

Name: Ramesh

Mobile Number: 7653983721

10th:78.76

12th:68.56

Degree: 68.56

Q2. Write a java program to read radius from user and calculate the area and circumference of circle?

Explanation: Formulae for Area of radius is ($\pi \times r^2$) and for Circumference is ($2 \times \pi \times r$).

Take radius from user as input and calculate the area and circumference.

Input : 5

Output : Area : 78.5

Circumference : 31.4

Q3. Write a java program to read length and breathe of a rectangle from user and print area and perimeter of rectangle?

Explanation : You have to take two inputs from user as length and breathe and then use them to calculate the area and perimeter of rectangle.

Area of rectangle: length * breathe **Perimeter of rectangle :** $2(\text{length} + \text{breathe})$

Input : 5 7

Output : Area : 35

Perimeter : 24

Q4. Write a java program to read a side(length) of a square and print the area and perimeter?

Explanation : You have to take one input from user as length or side of square and use it to calculate the area and perimeter of the square.

Area of square : side * side Perimeter of square : 4 * side.

Input : 12

Output : Area : 144

Perimeter : 48

Q5. Write a java program to read a length of a pipe from user in terms of CentiMeter and print the length in Foot and Meter?

Explanation : You have to take input from user as length of pipe in centimeter and then convert it to foot and meter and print it.

1 meter = 100 centimeter 1 foot = 30.48 centimeter

Input : 100

Output : In Meter = 1meter

In Foot = 3.28 Foot



Q6. Write a java program to read two integer value from user and perform all arithmetic operation and print result?

Explanation : You have to take two integer value from user as input and perform all arithmetic operation on it i.e Addition, Subtraction, Multiplication and Division.

Input : 4 2

Output : Addition : 6

Subtraction : 2

Multiplication : 8

Division : 2

```
{ Scanner sc = new Scanner (System.in);
    System.out.println ("Enter 2 integer values");
    int a = sc.nextInt ();
    int b = sc.nextInt ();
    int sum = a + b;
    int diff = a - b;
    int product = a * b;
    int quotient = a / b;
    System.out.println ("Sum = " + sum);
    System.out.println ("Difference = " + diff);
    System.out.println ("Product = " + product);
    System.out.println ("Quotient = " + quotient); }
```

Q7. Write a java program to print user enter number is positive or negative or zero?

Input : -1

Expected output : Negative

Input : 5

Expected output : Positive

Input : 0

Expected Output : Zero

Q8. Write a java program to read two integer value from user and print those two are equal or not?

Input : 4

4

Expected Output: Equal

Input : 3

5

Expected Output: Not Equal

```
Scanner sc = new Scanner()  
sc.nextInt();  
System.out.println("Enter the 2 digit int");  
int a = sc.nextInt();  
int b = sc.nextInt();  
if (a == b)  
{ System.out.println("Equal"); }
```

Q9. Write a java program to read two integer number from user and you have to print biggest among them?

Input: 3 5

Output: 5

Input: 24 150

Output: 150

```
{  
Scanner sc = new Scanner (System)  
out System.out ("enter the 2 integer values");  
int a = sc.nextInt();
```

Q10. Write a java program to read three integer value from user and print biggest among those three integer by using simple if statement?

Explanation : You have to take three integer as input from user and use if-else condition statement to find out which integer is biggest among them.

Input : 23 45 38

Output : 45

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

Q11. Write a java program to read the height and weight of a person from user and print the body mass index (BMI) of the person?

Explanation : You have to take two integer from user as height and weight of person and then use them to calculate BMI of that person.

BMI = weight / height*height (weight is kilograms and height in meters)

Input : 64kg 1.75m

Output : BMI of person is 22.9

Q12. Write a java program to read the integer value from the user and print it is an even or odd number?

Input : 23

Output : Odd

Input : 46

Output : Even

```
Scanner sc = new Scanner (System.in);
sc.nextLine();
System.out.print("Enter the integer value");
int a = sc.nextInt();
```

Q13. Write a java program to read the integer value from user and print that integer is a special 2 digit number or not?

Explanation : You have to take input from user and check it whether it is an special number or not (Only two digit you have to check).

Special two digit number is a number such that when the sum of digits of the number is added to the product of its digit, the result is equal to the original number.

Example : 59 : $5 * 9 = 45$ & $5 + 9 = 14$

$45 + 14 = 59$ So 59 is a special number.

Q14. Write a java program to calculate the simple interest of the amount which is given by user?

Explanation : You have to take three input from user one is the amount second is the interest rate and third is the time period i.e. how many year later you will pay. And then perform operation to calculate simple interest.(Take all has double datatype)

$$\text{S.I.} = \text{Amount} * (1 + (\text{Interest} * \text{Time}) / 100)$$

Input : 5000(Amount) 15(Interest Rate) 1(Time Period)

Output : 750.0

Q15. Write a java program to read three integer value from the user and print the biggest value?

Explanation : You have to take three integer value from user as input and perform operation to find biggest among them.

Input : 12 45 34

Output : 45

Q16. Write a java program to read day number from user and print the corresponding day name?

Explanation : You have to take an integer from user as input and then print there corresponding Day name.

Input : 1

Output : Sunday

Input : 4

Output : Wednesday

```
Scanner sc = new Scanner (System.  
    in);  
sc.nextLine();  
int a = sc.nextInt();
```

Q17. Write a java program to read month number from user and print corresponding how many days are in that month?

Explanation : You have to take integer input from user as month number and print corresponding days in that month.

Input : 2

Output : 28 or 29

Input : 11

Output : 30

```
Scanner sc = new Scanner (System.in);
sc.nextLine();
int a = sc.nextInt();
```

$2 / \{ a == 1 \} || a == 3 || a == 5 || a == 7 || a == 8 || a == 10$

Q18. Write a java program to read the year value from the user and print it is a leap year or not?

Explanation : Take input from user as year and print that year is leap year or not.

That number should be divisible by 4 and 400 to be leap year.

Input : 1600

Output : Leap Year

Input : 1700

Output : Not a leap year

```
Scanner sc = new Scanner (System.in);
sc.nextLine();
int a = sc.nextInt();
```

Q19. Write a java program to read three distinct integer value from user and print the middle value?

Explanation : Take three input value from user and check whether they are distinct or not. If distinct then print the middle value.

Input : 23 56 34

Output : 34

Input : 23 34 23

Output : Please enter distinct values

Q20. Write a java program to read an integer from user and print upto that integer the fibonnaci series?

Explanation : It is a series in which the next integer is the sum of previous two integer i.e. the third element of series is the addition of first two element of the series. And the first and second element of series are fixed i.e. 0 & 1.

Series always start from 0 1

Input : 15

Output : 0 1 1 2 3 5 8 13

Q21. Write a java program to print prime numbers upto user entered value?

Explanation : Prime number is a number that is greater than 1 and divided by only 1 or itself.

Input : 20

Output : 2 3 5 7 11 13 17 19

Q22. Write a java program to check whether the user entered number is palindrome or not?

Explanation : Palindrome number are those number which are same after reverse.

Input : 545

Output : Palindrome

Input : 345

Output : Not a palindrome

Q23. Write a java program to calculate factorial of the user entered number?

Explanation : Factorial of n is a product of all positive descending integers i.e. $(n)*(n-1)*(n-2)...$

Input : 5

Output : 120

Q24. Write a java program to check whether given number is Armstrong or not?

Explanation : Armstrong number are positive m-digit number that is equal to the sum of the m^{th} powers of their digit.

$153 = 1 + 125 + 27 = 153$ So 153 is Armstrong number.

Input : 125

Output : Not an Armstrong number

Input : 370

Output : Armstrong number

Q25. Write a java program to read the int value from user and print sanju if number is divisible by 3, print geeta if number is divisible by 5, print sanju weds geeta if number is divisible by both 3&5 otherwise print breakup?

Explanation : You have to take input from an user and check whether it is divisible by 3 and 5 or not. And print output as question says.

Input : 15

Output : sanju weds geeta

Input : 13

Output : Breakup

Q26. Write a java program to print ASCII values of the characters from A to Z and a to z and 0 to 9?

Output :

65 66 67.....90

97 98 99.....122

48 49....57

Q27. Write a java program to convert number into a word between 1 to 20?

Explanation : If the user entered number is 12 then output should be Twelve.

Input : 9

Output : Nine

Input : 15

Output : Fifteen

Q28. Write a java program to check whether the user entered number is automorphic or not?

Explanation : Automorphic number are those numbers whose square ends with the same number itself. For example, $25 = 625$ It is an automorphic number.

Input : 76

Output : Automorphic Number

Input : 12

Output : Not an automorphic number

Q29. Write a java program to check the user entered number is Emirp or not?

Explanation : Emirp number are those prime numbers whose reverse is also an prime number.

For example, 79 is an prime number reverse is 97 which is also an prime number. So 79 is an emirp number.

Input : 13

Output : Emirp Number

Input : 21

Output : Not an Emirp number

Q30. Write a java program to check whether user entered number is strong number or not?
Explanation : Strong number are those numbers whose factorial sum of all digit is equal to that number itself.

Input : 145

Output : Strong number

$$(1! + 4! + 5! = 145)$$

Q31. Write a java program to print binary format of user entered number?

Explanation : You have to take an integer as an input from user and use predefined methods to print its corresponding binary value.

Input : 15

Output : 1111

Input : 23

Output : 10111

Q32. Write a java program to check whether user entered number is evil number or odious number?

Explanation : Evil numbers are those numbers whose binary value contains even numbers of 1. All others are odious numbers.

Input : 15

Output : Evil Number

15 => 1111 => four 1's are present so it is an evil number.

Input : 16

Output : Odius.Number

16 => 10000 => odd number of 1's.

Q33. Write a java program to check whether user entered number is an duck number or not?

Explanation : Duck number are positive non-zero numbers that contains 0 in it.(The digit should not be presented at the starting of the number.)

Example,

3210 is a duck number because zero is at the end of the number.

7033 is a duck number because zero is at the second position.

08237 is not a duck number because it contains zero at beginning.

030405 is not a duck number because it contains zero at starting.

00153 is also not a duck number because it contains leading zero's.

Q34. Write a java program to check whether user entered number is Xylem or Phloem?

Explanation : A number N will be a xylem if the sum of its extreme digits (First and Last) is equal to the sum of mean (all digits except first and last). Otherwise it is an Phloem.

Example : 12348 => $1+8 = 2+3+4$

So the number 12348 is an xylem.

Input : 12225

Output : Xylem

Input : 17156

Output : Phloem

Q35. Write a java program to find square root of a number without using sqrt() method?

Input : 625

Output : 25

Explanation : You have to take an input from user i.e. num.

Then take one variable $\text{sqrt} = \text{num}/2$.

Now take temporary variable $t = \text{sqrt}$.

Now, $\text{sqrt} = (\text{t} + (\text{num}/\text{t}))/2$. (Formula for calculating)

Now use while loop to check square root i.e. from $\text{t}-\text{sqrt}$ to 0 and return sqrt .

Q36. Write a java program to find GCD(Greatest common divisor) of two number?

Explanation : GCD is the highest number which completely divides user entered two numbers.

Input : 12 8

Output : 4

Factors of 12 => 1,2,3,4,6,12

Factors of 8 => 1,2,4,8

Common factors => 1,2,4

GCD => 4.

Q37. Write a java program to find smallest among three integer values by using conditional op?

Input : 12 34 65

Output : 12

***We have to use conditional operator.**

Q38. Write a java program to check user entered integer is perfect number or not?

Explanation : Sum of its divisor is equal to that number is known as perfect number.

Input : 6

Output : Perfect Number

Divisor of 6 => 1,2,3

$$1 + 2 + 3 = 6.$$

Input : 5

Output : Not a perfect number.

Divisor of 5 => 1.

Q39. Write a java program to print the difference between sum of even digit and sum of odd digit in user entered number?

Input : 345

Output : 4

Odd = $3+5 = 8$

Even = 4

$8 - 4 = 4.$

Q40. Write a java program to print table of user entered integer in following format?

9 * 1 = 9

...

...

9 * 10 = 90

Q41. Define a java method to return average of digits in user entered number?

Input : 345

Output : 4

$$3 + 4 + 5 / 3 \Rightarrow 12/3 = 4.$$

Q42. Define a java method to count setted digit from binary conversion of user entered number

Explanation : Setted digits are 1 in there binary value.

Input : 15

Output : 4

15 => 1111 => Four 1's are there.

Q43. Write a java program to check user entered number is disarium or not?

Explanation : It is a number in which the sum of the digits to the power of their respective position is equal to the number itself.(Position counted from left to right starting from 1).

For example, $135 \Rightarrow 5 \text{ to power } 3 + 3 \text{ to power } 2 + 1 \text{ to power } 1$

$$125 + 9 + 1 = 135$$

So 135 is disarium number.

Input : 89

Output : Disarium Number

Input : 98

Output : Not a disarium number.



Q44. Write a java program to check whether user entered number is an happy number or not?

Explanation : Happy number is a number which eventually reaches 1 when replaced by the sum of the square of each digit.

Example, $94 \Rightarrow 9 \text{ to power } 2 + 4 \text{ to power } 2 = 97 \Rightarrow 9 \text{ to power } 2 + 7 \text{ to power } 2 = 130 \Rightarrow 1 \text{ to power } 2 + 3 \text{ to power } 2 + 0 \text{ to power } 2 = 10 \Rightarrow 1 \text{ to power } 2 + 0 \text{ to power } 2 = 1.$

Hence 94 is a happy number.

Input : 2

Output : not an happy number.

Q45. Define a method which return n to power p?

Input : 4 2 (n = 4 & p = 2)

Output : 16

Q46. Define a java method to convert decimal to binary & decimal to octal and decimal to hexadecimal without using inbuilt methods?

Explanation : You have to take input from user as integer and perform operation to convert it into binary and octal and hexadecimal.

For converting to binary divide it by 2 and take remainder.

For converting to octal divide it by 8 and take remainder.

For converting to hexadecimal divide it by 16 and take remainder(use A to F for 10 to 15).

Q47. Write a java program to print object of an class?

Explanation : Create Student class with custom constructor and after that print the properties of student object not the address of object(by using over-riding concept).

Input : “Name” “id” “stream”

Output : Name id stream (Not the address of object).

Q48. Create a Student class with custom constructor taking three parameters and the Student object have total four properties i.e. id, firstName, lastName, birthdate in which id is auto generated other user have to write while creating object. After that create four different object of student class and print them using any loop?

Explanation : Create student class and then create custom constructor of it, then in main method create different objects of student class and store it in an array or list. After that iterate that array using any loop.

Q49. Write a java program to read user entered number and print its corresponding values in us currency, French currency and Indian currency?

Explanation : You have to take value from user and convert it into US dollars and French euro and Indian rupees.(You can use inbuilt classes or methods to perform these actions i.e NumberFormat class and getCurrencyInstance() method).

Input : 12324.13

Output :

US : \$12324.13

French : 12 324,13 Euro

Indian : Rs. 12,324.13

Q50. Write a java program to find the area of parallelogram using static initialization blocks?

Explanation : Static initialization blocks are executed when the class is loaded and you can initialize static variable in those blocks. You have to read two input from user i.e. breathe and height and check both are greater then zero if not then print Error message.

Input : 1 3

Output : 3

Input : -1 3

Output : Error

Q51. Write a program to print default value of each data type in java(primitive and non-primitive both)?

Explanation : Use each data type as global variable in class and print it to get its default value.(Class is also an non-primitive datatype in java).

Q52. Write a java program to show the difference between continue and break keyword in java?

Explanation : use both keyword in same case so you get to know whats the difference is there.

Better to use switch case for this.

Q53. Write a java program to show the working of for loop and for each loop?

Explanation : use custom array(declare it with any value) and iterate it with for loop and for-each loop or you can use this array :

Array = [2,5,4,8,3,7,2]

Q54. Write a java program to print the discount rate of the product?

Explanation : You have to take two values from user as input first is the original price i.e. MRP of product and second is percentage off on that product and perform operation to calculate the new rate of product.

Input : 100 25

Output : 75

Q55. Write a java program to print the overall percentage of a student?

Explanation : Take 4 input from user as different subject marks and then divide it with total number of subject and print the result.

Input : 45 67 23 65

Output : 50.00%

Q56. Write a java program to print the sum of prime numbers from user entered ranges?

Explanation : You have to take two integer as ranges from user and then use any loop and check which number is prime and print it.

Q57. Write a java program to show the difference between pre increment & post increment operator and pre decrement and post decrement operator.

Q58. Write a java program to calculate the Future investment value?

Explanation : You have to take three values from user i.e. Present value(PV), Interest paid by investment(i) and Number of period investment will held(N). And then use this formula to calculate.

$$FV = PV * ((1 + i)^N)$$

Input :

PV : 1000

i : 10% = 10 / 100 = 0.1

N : 2(in years)

Output :

FV : 1210.00

Q59. Write a java program to find LCM of two numbers?

Explanation : LCM of two number is the smallest positive integer that is perfectly divisible by both the numbers(without a remainder).

Example, LCM of 72 and 120 is 360.

Input : 12 18

Output : 36

Q60. Write a java program to calculate permutation and combination of two numbers?

Explanation : You have to take two input numbers from user as n & r. Then calculate NCR and NPR.

NCR = factorial of (n) / factorial of (n-r) * factorial of (r).

NPR = factorial of (n) / factorial of (n-r).

Input : 5 3

Output : NCR = 10

NPR = 60