1. Aim: Java program to Create a Class called Student with Constructor that takes in a name

Pseudo Code:

Class Student:

Declare variables:

name (String)

id (int)

grade[] (char array)

avg (int), initially 0

Constructor Student (name, id, grade[]);

Set Sum to 0

Set Count to 0

Assign name to the provided name

Assign id to the provided id

Assign grade to provided grade

for each char c in grade:

Increment Count by 1

If C is 'A':

Add 9 to Sum

Else if C is 'B':

Add 8 to Sum

else if C is 'C':

Add 7 to Sum

Calculate the avg by Rounding the result of Sum divided by Count

Method display():

Print Name, ID, Average Grade

Main Program:

Create a student object S1 with name, id and grades as parameters

Call the display() method on S1.

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1 Aim: To write Pseudo Code for Sorting algorithm

Pseudo Code:

Declare an array 'b' of size 20

Declare i (int)

Create a Scanner object for user input

print "enter elements:"

Read the list of elements using the for loop.

Call the Sort function on array b from index 0 to a to Sort the entered elements

print "\n Sorted list"

for each 'i' from 0 to 'a-1':

print the value of b[i]

2. Aim: To write Pseudo Code for the program to find max_min in an array

Pseudo Code:

* Declare an array 'arr[]' of size n

Declare two variables 'min' and 'max'

get the array elements from the user using the for loop

Set min = arr[0] and max = arr[0]

For each index 'i' from 1 to n-1

if arr[i] < min then

set min = arr[i]

if arr[i] > max then

set max = arr[i]

Print the min and max variables

3 Aim: To write Pseudo Code for second min and max

Pseudo Code:

declare the array[] and min, max, Smin and Smax

get the array elements from the user using the loop

find out min and max

For each index 'i' from 1 to n-1

if arr[i] < min and min > Smin

Smin = arr[i]

if arr[i] > max and max > Smax then

Smax = arr[i]

Print Second min and Second max

4. Aim: To write Pseudocode for Pattern

Pseudo Code:

```
initialize the variables i, j, n 5
    for i in range from n to 1
        for j in range from 1 to i
            print ("*")
    Print("\n")
```

5. Aim: To write Pseudo Code for Perfect number

Pseudo Code:

declare the variables i, sum

get the input number from the user

find all the factors of the given number using for and if loop

```
for (i=1, i<=n; i++)
    if (n%i==0)
        add i to Sum
```

if Sum is equal to given number then it is perfect numbers

6. Aim: To write Pseudo Code for Palindrome

Pseudo Code:

declare the Scanner class

get the input string from the user

using StringBuilder() function in reverse()
function to reverse the string
Compare the original and reversed string.
if equal it is palindrome

3. Aim: To write Pseudo code for checking given number is Amstrong or not

Pseudo Code:

declare the Scanner class
get the input number from the user
Store it in a temp variable

```
while (a>0)
{
    r = a%10;
    Sum += r*r*r;
    a = a/10;
}
if (temp == Sum)
    it is amstrong
else
    it is amstrong
```

8. Aim: To write Pseudo Code for finding the volume of Sphere

Pseudo Code:

declare the Scanner Class
get the value of radius from the user
declare a variable volume (double)
Volume = (Math.PI * (4/3) * r * r * r

Print the value of volume

9. Aim: To write Pseudo Code for Power

Pseudo Code:

declare the Scanner class to get the input
get the values of base and exponent
then power = Math.pow(base, exponent)
print the value of Power

10. Aim: To write pseudo Code for Performing Arithmetic Operations

Pseudo Code:

declare the Scanner Class to get input
get the operator and operand
if Operator = Sum
print Sum of given numbers
else if Operator = '-'
print the difference of numbers
else if Operator = '*'
Print the multiplication of numbers
else if Operator = '/'
Print the divison of numbers