ASSIGNMENT-2

JAVA PROGRAMMING

CSA0914

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Aim:

To write java program for reversing a numbers

Pseudo code:

1) initialize the variables and get the numbers from the user
2) using the while loop perform:
3) get the last digit from the number
4) add it with sum and multiply with 10
5) remove the last digit fom the numbers
6) display the result.

Program

```
import java.util.Scanner;
Public class reverse {
   Public static void main (String[] args){
   Scanner input = new (Scanner (System.in);
    System.out.print ("enter the number");
    int num: Scanner.nextInt();
     int rev=0, temp;
     while (num>0)
     {
       temp: num%10;
       rev = rev* 10+temp;
       num= num/10;
     }
    system.out.print ("reversed number = "+ rev);
}}
```

```
{
gcd=i;
}}
System.out.print("gcd"+gcd);
}
}
```

Sample output

enter two numbers : 6 90
gcd = 6

Aim :

To write java program for merging two sorted array arrays into a single sorted array

Pseudo code :

1) initialize the variables and get the input stings from the user
2) merge the both stings and then sort the array and store it in new array
3) Convert the array into string and display the single merged array

Program :

```
int [] a={1,4,7,9};
int[] b={3,6,11};
int[]c= new int[a.length + b.length];
for(int i=0; i<a.length ; i++)
    c[i] = a[i];
```

```
for (i=0; i<b.length; i++)
    c[i+a.length] = b[i];
  Array.sort(c);
  System.out.print(Arrays.toString(c));
}
```

Sample output:

Sorted array: [1,3,4,6,7,9,11]

Aim:

To write java program for find the frequency of each char in a string

Pseudo code:

1) initialize the variables and get the input string from the user
2) An array of size 256 is used to store the frequency of each ASCII character
3) Iterate the loop over each char of the string and update the frequency count
4) display the output

Program:

```
string input = "hello";
  int[] frequency = new int[256];
  for (int i=0; i<input.length; i++){
```

```
else
System.out.print("Not Armstrong");
}
}
```

Sample output

```
enter the number : 153
Amstrong
```

Aim:

To write java program for finding the gcd of two numbers

Pseudo Code:

1). To initialize the variables and get the numbers a & b from the user

2). Using the for loop find a number which is less than a & b and also the number should divisible by both and and b

3). If you get multiple numbers than choose the largest one

Program:

```
System.out.print("enter two number :");
int a = input.nextInt();
int b = input.nextInt();
int i, gcd = 1;
for(i=1; i<=a && i<=b; i++)
{
  if(a%i==0 && b%i==0)
```

Sample output

enter the number: 2435

reversed number : 5342

2. Aim:

To write java program for checking weather a number is Amstrong or not

Pseudo code:

1) initialize the variables and get the input number form the user
2) using while loop get the last digit form the number.
3) find the cube and add it with sum variable. Then remove the last digit. Continue until the number is greater than zero
4) display the output

Program:

```
System.out.print("enter the number:");
int n = input.nextInt();
int temp=n, b, sum=0;
while(n>0){
 b=n%10;
 sum+=b*b*b;
  n=n/10;
}
if(sum==temp)
{ system.out.print("Amstrong");
}
```

```
char ch = input.charAt(i);
    frequency[ch]++;
}
for(i=0; i<frequency.length; i++){
    if(frequency[i]>0){
    System.out.print((char)i + ":" + frequency[i]);
}}}}
```

Sample output:

```
e:1
h:1
l:2
o:1
```