

## **GREEDY ALGORITHMS**

### **PROBLEM 1:**

#### **1-G COIN PROBLEM**

##### **AIM:**

Write a program to take value V and we want to make change for V Rs, and we have infinite supply of each of the denominations in Indian currency, i.e., we have infinite supply of { 1, 2, 5, 10, 20, 50, 100, 500, 1000} valued coins/notes, what is the minimum number of coins and/or notes needed to make the change.

##### **CODE:**

```
#include<stdio.h>

#include<string.h>

int main()
{
    int arr[]={1000,500,100,50,20,10,5,2,1};

    int x;

    scanf("%d",&x);

    int count = 0;

    int a = (sizeof(arr) / sizeof arr[0]);

    for(int i=0;i<a;i++){

        while(x >= arr[i])

        {

            x= x-arr[i];

            count++;

        }

    }

    printf("%d",count);

}
```

INPUT:

49

OUTPUT:

5