**Practical – 7**

**Implement Program for “Making Change” using Greedy design technique.**

#include<stdio.h>

#include<malloc.h>

int \* sort(int \*d,int n) {

int i,j,k;

for(i=0; i<n-1; i++) {

for(j=i+1; j<n; j++) {

if(d[i]<d[j]) {

k=d[i];

d[i]=d[j];

d[j]=k;

} } } }

int main() {

printf("21012021003\_AMIT GOSWAMI \n");

int amt,\*d,\*ans,n,i,flag=0,total=0;

printf("Enter no of coins:-\n");

scanf("%d",&n);

d=(int \*)malloc(n\*sizeof(int));

ans=(int \*)malloc(n\*sizeof(int));

for(i=0; i<n; i++) {

printf("Enter value of coin no. %d:-\n",(i+1));

scanf("%d",&d[i]);

}

sort(d,n);

printf("enter amount to get change:-\n");

scanf("%d",&amt);

i=0;

while(amt>0) {

while(d[i]<=amt) {

ans[i]++;

amt=amt-d[i];

total++;

}

i++;

if(amt==0) {

break;

}

if(d[n-1]>amt) {

flag++;

break;

}

}

if(flag>0) {

printf("unsuccessfull\n");

}

else {

printf("%d coins used.\n",total);

for(i=0; i<n; i++) {

printf("%d coins used of %d .\n",ans[i],d[i]);

} } }

