Assignment 1

Introduction to programming in C

Question 1

You have a certain number of 100 rupee notes, 10 rupee notes and 1 rupee notes with you. There is an item you want to buy whose price is given to you. Write a program to find if the item is affordable, that is the price of the item is less than or equal to the current money you have.

Input

Four non negative integers. The first input is an integer representing the number of 100 rupee notes. The second input is an integer representing the number of 10 rupee notes. The third input is an integer representing the number of 1 rupee notes. The fourth input is an integer representing the price of the item.

Output

You have to output 1 if the item is affordable. You have to output 0 if the item is not affordable.

Solution

```c
#include <stdio.h>
int main()
{
  int hundreds,tens,ones;
  int price;
  int money;

  scanf("%d",&hundreds);
  scanf("%d",&tens);
  scanf("%d",&ones);
  scanf("%d",&price);

  money = hundreds*100 + tens*10 + ones;

  if( price <= money){
    printf("1");
  }
  else{
```

```
    printf("0");
  }

  return 0;
}
```

Question 2

You are given two positive integers, say M and N. Check whether M is an exact multiple of N, without using loops.

Input

Two positive integers, say M and N.

Output

You have to output 0 if M is not a multiple of N. You have to output 1 if M is a multiple of N.

Solution

```
#include <stdio.h>
int main()
{
  int m,n;
  int quotient;

  scanf("%d",&m);
  scanf("%d",&n);

  quotient = m/n;

  if(quotient*n == m){
    printf("1");
  }
  else{
    printf("0");
  }

  return 0;
}
```

Question 3

Given three integers a, b and c, find if they are strictly increasing/decreasing or not.

Input

Triplet of three integers (a,b,c)

Output

You have to output 1 if they are either in strictly increasing ($a > b > c$) or decreasing ($a < b < c$) order. Output 0, otherwise.

Solution

```c
#include <stdio.h>

int main(){
  int a,b,c;
  scanf("%d %d %d", &a, &b, &c);

  if(((a>b) && (b>c))||((c>b) && (b>a))){
    printf("1");
  }
  else{
    printf("0");
  }
  return 0;

}
```