23k-3032 (Shahtlunain)

Task: 1 (a)

GCD

1- START

2- declare num1, num2, i=1, gcd=1 as integers.

3- Enter/read two numbers.

4- repeat until i<=num1 and i<=num2

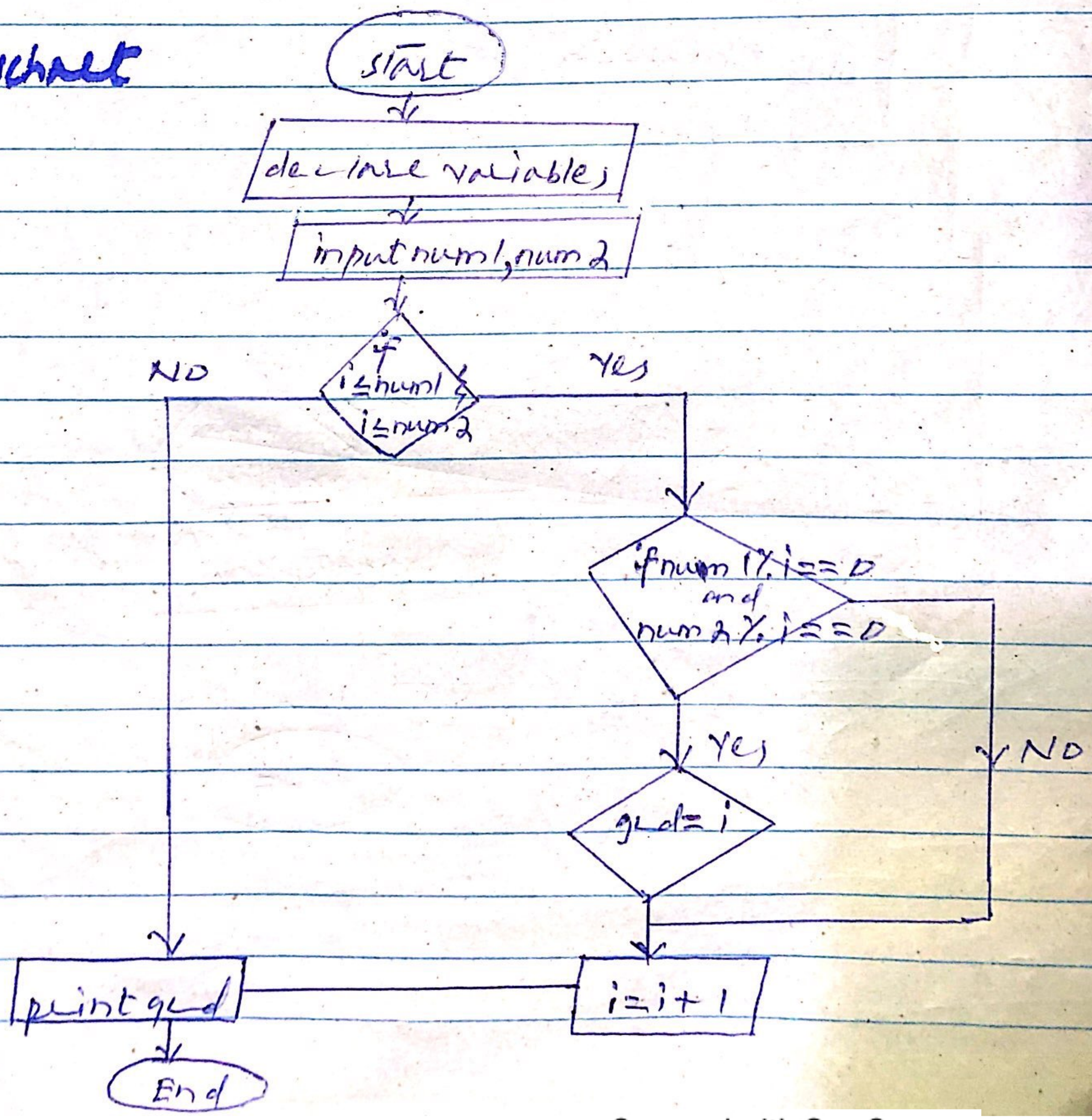
if num1 % i == 0 and num2 % i == 0

gcd=i

5- print gcd

6- STOP

flowchart



Scanned with CamScanner

Task 1(a) (b)

1- start

2- declare variables

3- Enter read numbers A, B, C

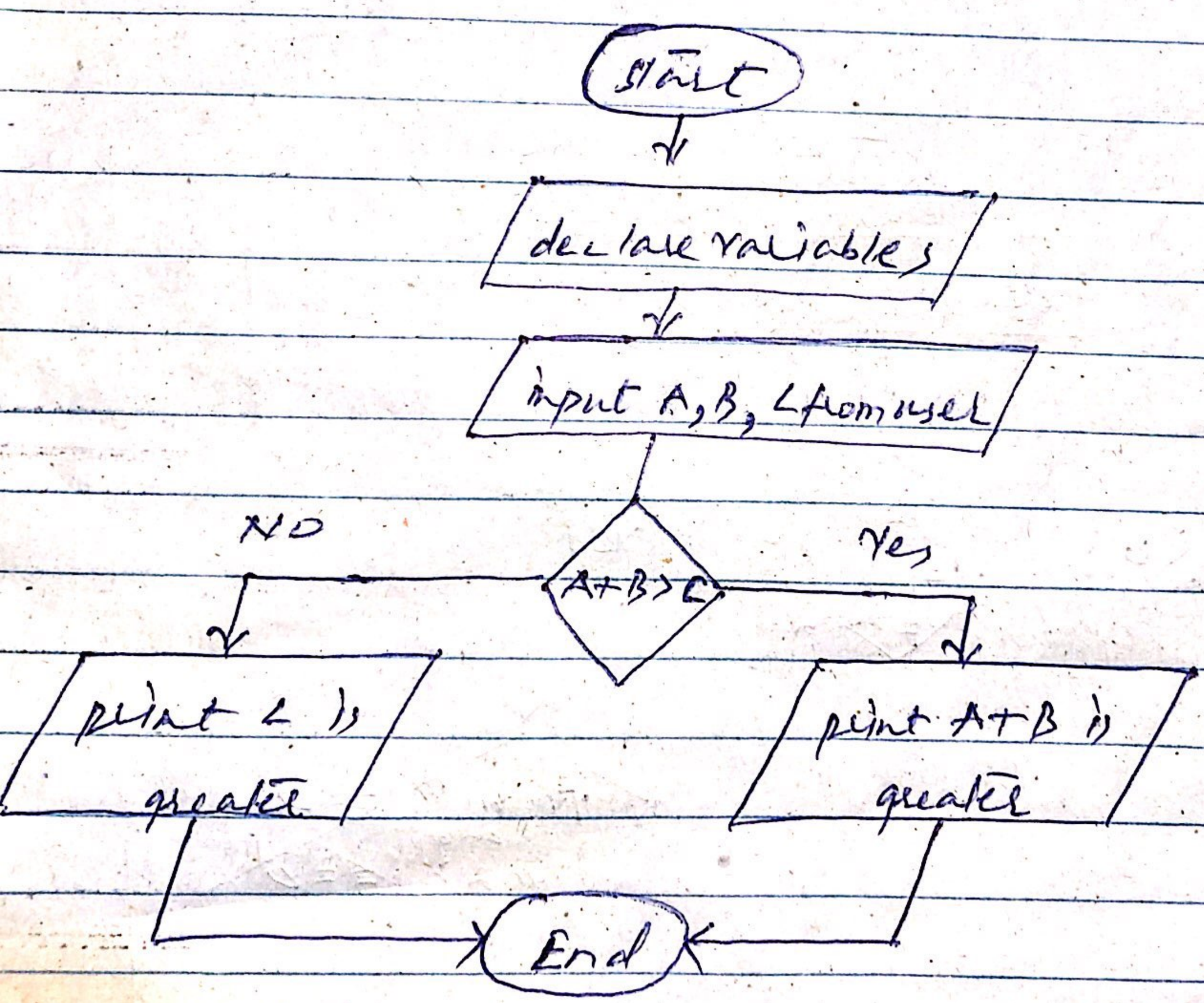
4- if (A + B > C)

{ print("%d + %d is greater", A, B); }

else {

print f("%d is greater", C); }

5- End



Scanned with CamScanner

1- start

2- declare variables, a, b, c, d, e, f, g, h, i, j

3- input 10 numbers from user

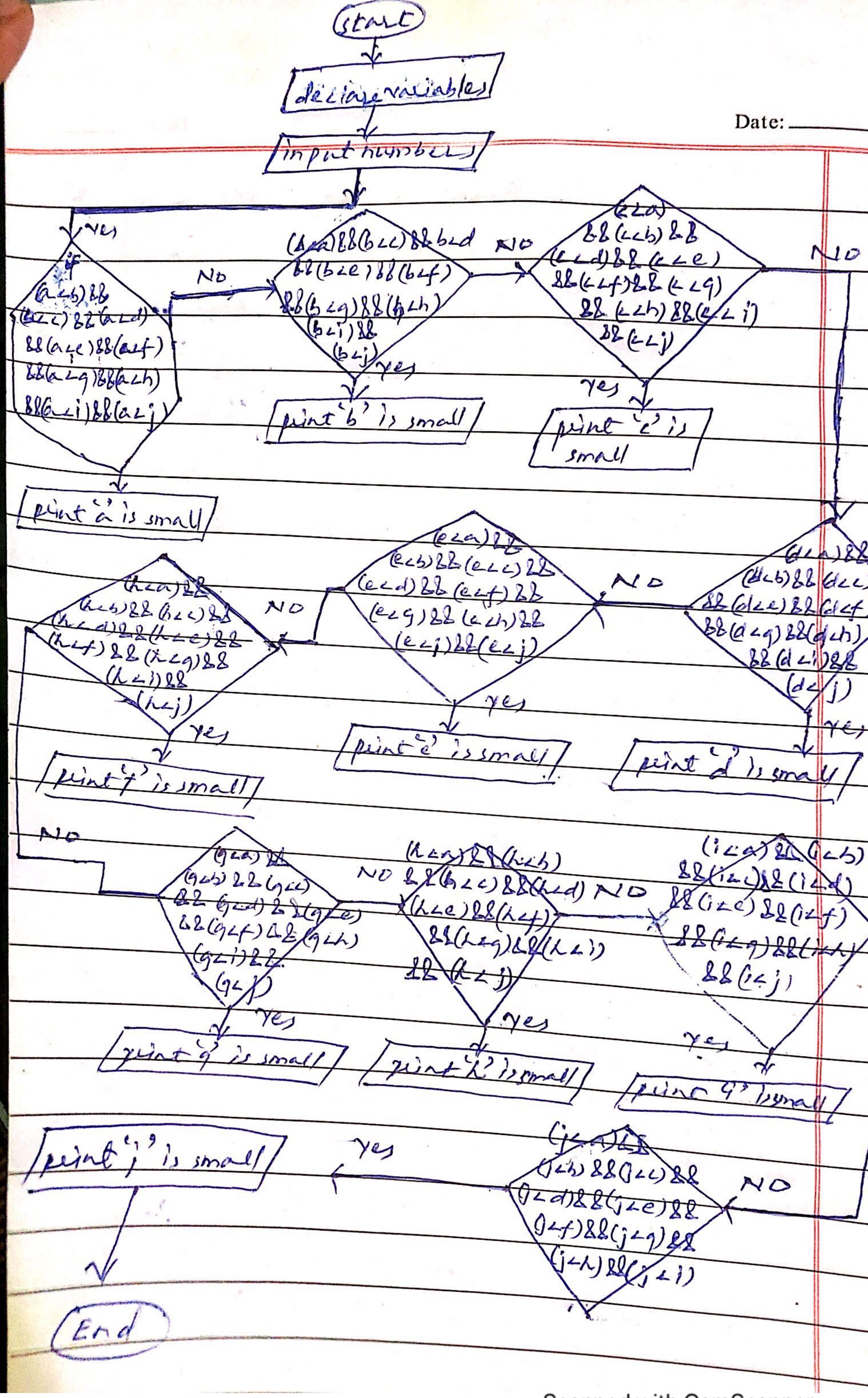
4- if(a<b && a<c && a<d && a<e && a<f && a<g && a<h && a<i && a<j) {printf("%d is smallest", a)}
else repeat step 4 for b, c, d, e, f, g, h, i, j

5- print smallest number

6- stop

Scanned with CamScanner

Date:



Scanned with CamScanner

1- Start

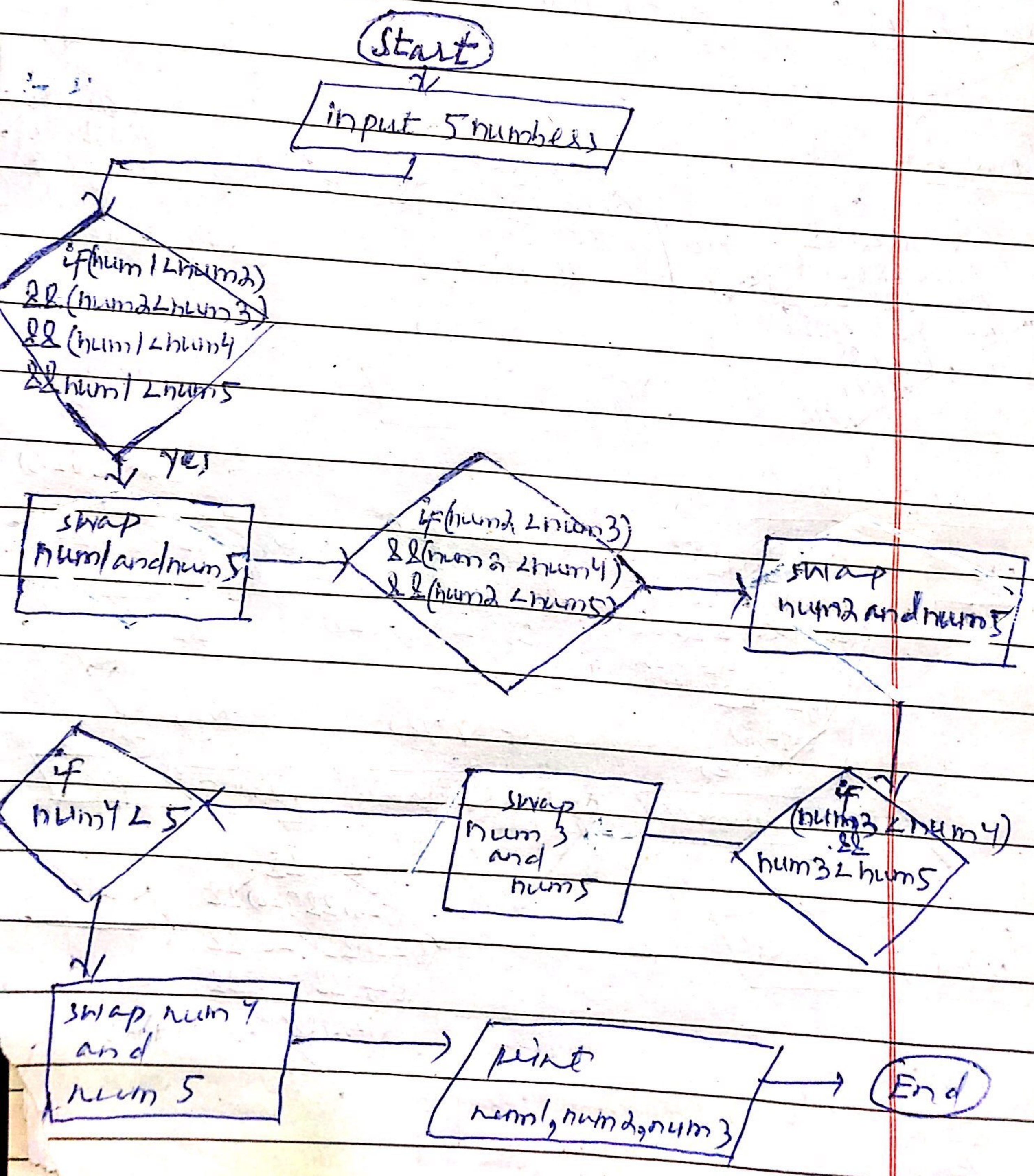
d) 2- Take input of 5 numbers.

Date:

3- check every 2 consecutive numbers. If the previous number is less than found number, swap both the number values.

4- print the 5 values

5- End



Scanned with CamScanner

e) 1- start

2- declare variable

3- input number of numbers i.e., n

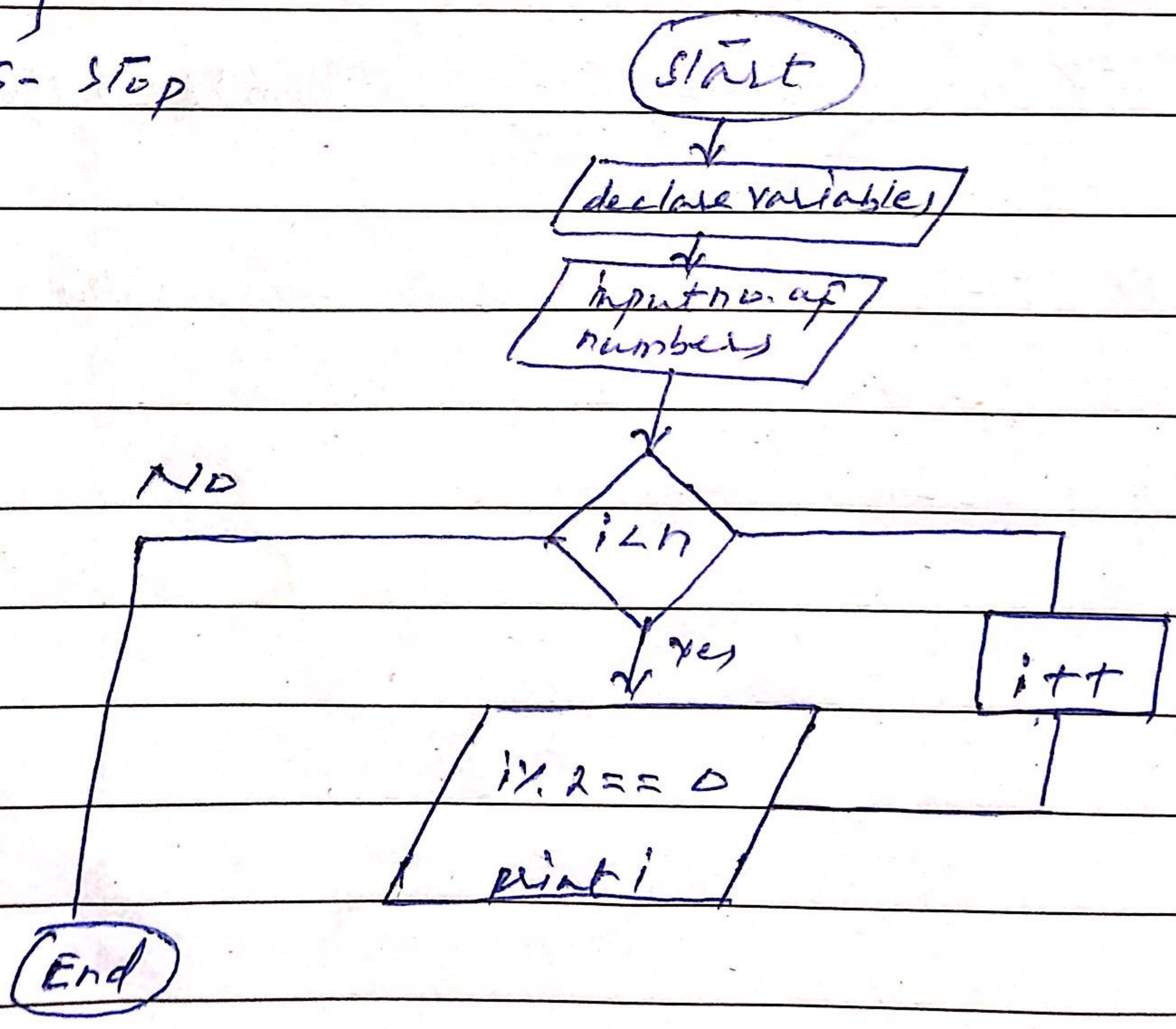
4- for (int i = 0 ; i<n , i++)

{ if (i % 2 == 0)

{ print i }

}

5- stop



Scanned with CamScanner

Task : 2

(a) Age

Integer (%d), because 'Age' is always a whole number. it cannot be in points.

(b) Temperature

Integer (%d), because 'Temperature' can be like 35°C or 41°C etc never in decimals.

(c) Longitude

float (%f), because longitude specifies location therefore, must be precise e.g., 39.7°.

(d) Third letter of your name.

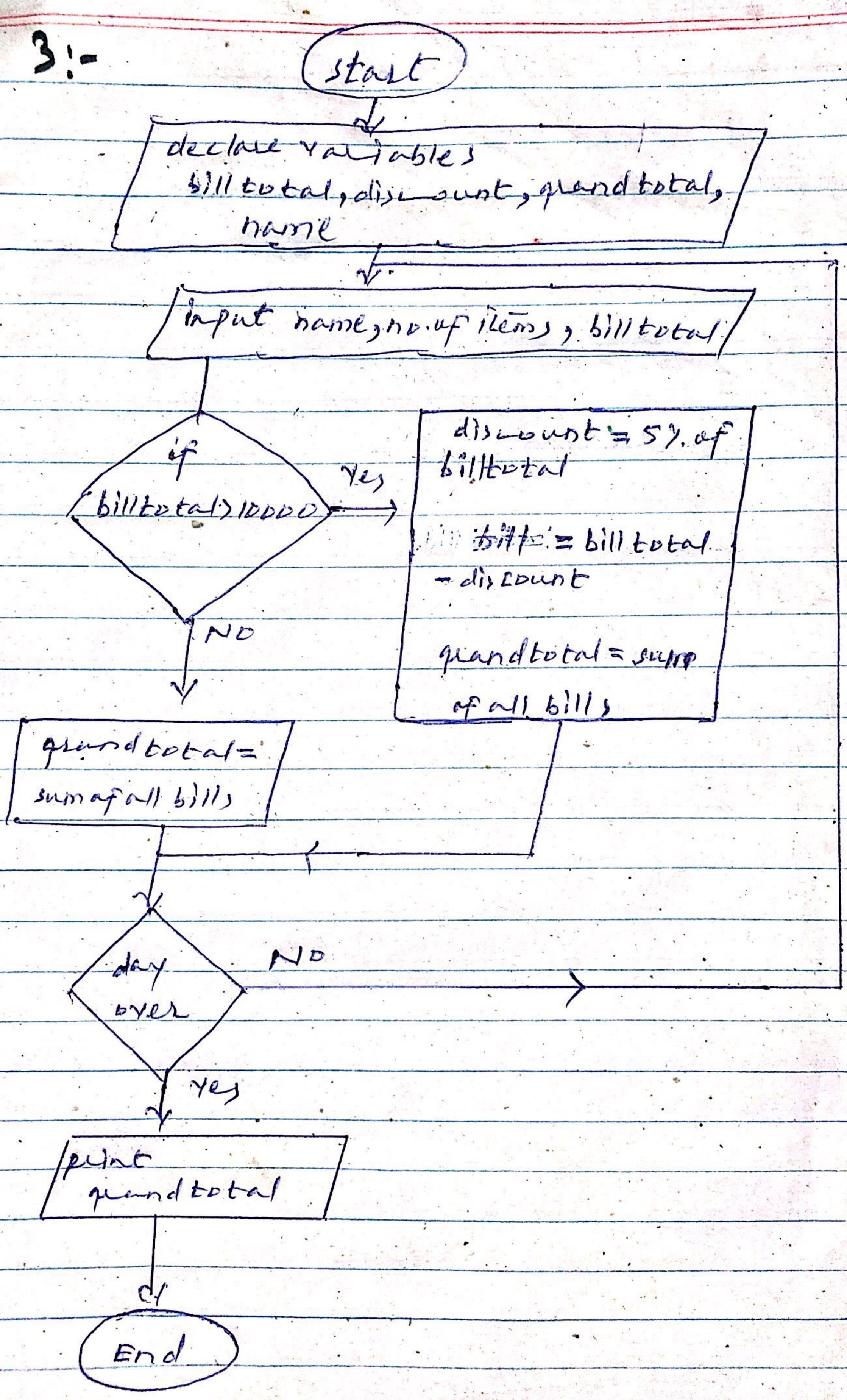
char (%c), because it is used to store characters like alphabets or state etc.

(e) wind speed.

float (%f), because wind speed can be in decimal points.

Scanned with CamScanner

Task 3:-



Scanned with CamScanner

Task 4:- (Binary Equivalent)

```
#include<stdio.h>
#include<conio.h>
void main (void){
int num, i;

printf("Enter the number\n");
scanf("%d", &num);

for (i=8; i>=0; i--){
  printf("%d", (num>>i)&1); }
}
```

Pseudocode:-

1- Start
2- Enter/read the number.
3- FOR (i=8; i>=0; i--)
   print (num>>i) & 1
4- Stop

Scanned with CamScanner

Task 5:-

```
#include <stdio.h>
#include <conio.h>
void main (void) {
int Item1, Item2, Item3, Item4, Item5, ItemTotal, gst, profit;

float GST, GrandTotal, TotalProfitEarned;

printf("Enter the price of Item 1:\n");
scanf("%d", &Item1);
printf("Enter the price of Item 2:\n");
scanf("%d", &Item2);
printf("Enter the price of Item 3:\n");
scanf("%d", &Item3);
printf("Enter the price of Item 4:\n");
scanf("%d", &Item4);
printf("Enter the price of Item 5:\n");
scanf("%d", &Item5);

printf("\n        Salman Grocery Store        ");
printf("\n-----------------------------------");
printf("\n Description        |        Price");
printf("\n-----------------------------------");
printf("\n Item 1             |        %3d", Item1);
printf("\n Item 2             |        %3d", Item2);
printf("\n Item 3             |        %3d", Item3);
printf("\n Item 4             |        %3d", Item4);
printf("\n Enter profit and gst applied:");
scanf("%d %d", &profit, &gst);
```

Scanned with CamScanner

```
printf("\n Item5                    | %3d", Item5);
printf("\n ------------------------------");

ItemTotal = Item1 + Item2 + Item3 + Item4 + Item5 ;
printf("\n ItemTotal                | %3d", ItemTotal);

// Mr Salman Walks on 15% profit
// 18% GST on each sale Mr. Salman makes

GST = ItemTotal * gst / 100 ;
printf("\n G.S.T                    | %.1f", GST);
printf("\n ------------------------------");

GrandTotal = ItemTotal + GST ;
printf("\n GrandTotal               | %.1f", GrandTotal);

TotalProfitEarned = ItemTotal * profit / 100 ;
printf("\n Total Profit Earned      | %.2f", TotalProfitEarned);
```

Scanned with CamScanner

Pseudocode:-

1- Enter / read Item 1, Item 2, Item 3, Item 7, Item 5.
2- Calculate Item total by adding Item 1, Item 2, Item 3, Item 7, Item 5.
3- Print("Salman Grocery Store").
7- Print("Description | Price")
5- Print("Item 1 and its price")
6- Print("Item 2 and its price")
7- Print("Item 3 and its price")
8- Print("Item 7 and its price")
9- Print("Item 5 and its price")
10- print("Item total and its amount.")
11- print("G.S.T by multiply Item total by g.s.t percentage")
12- print("Grand Total by adding Item total and GST")
13- print("Total Profit Earned by multiplying Item total by profit percentage").

Scanned with CamScanner