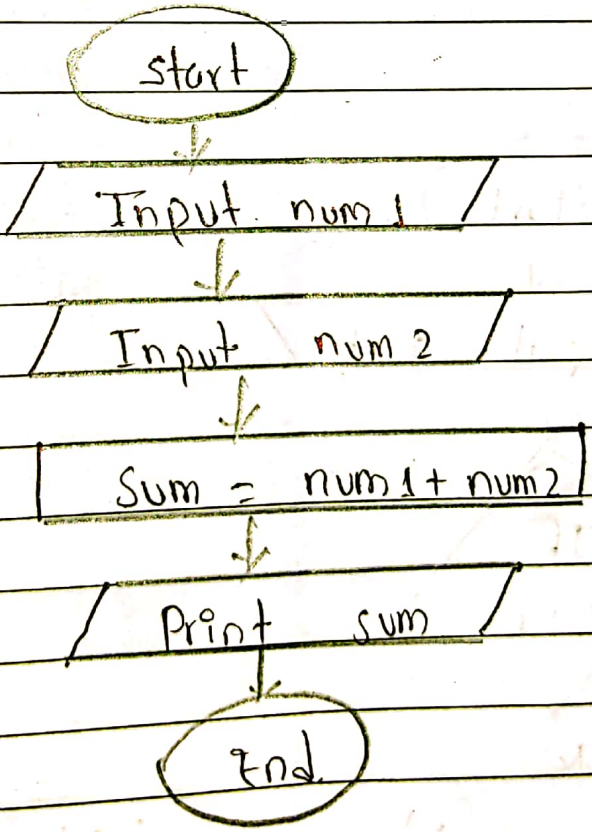
Ashwlani kr. Chaudhary
[BCT - AJ 019

Assignment - II

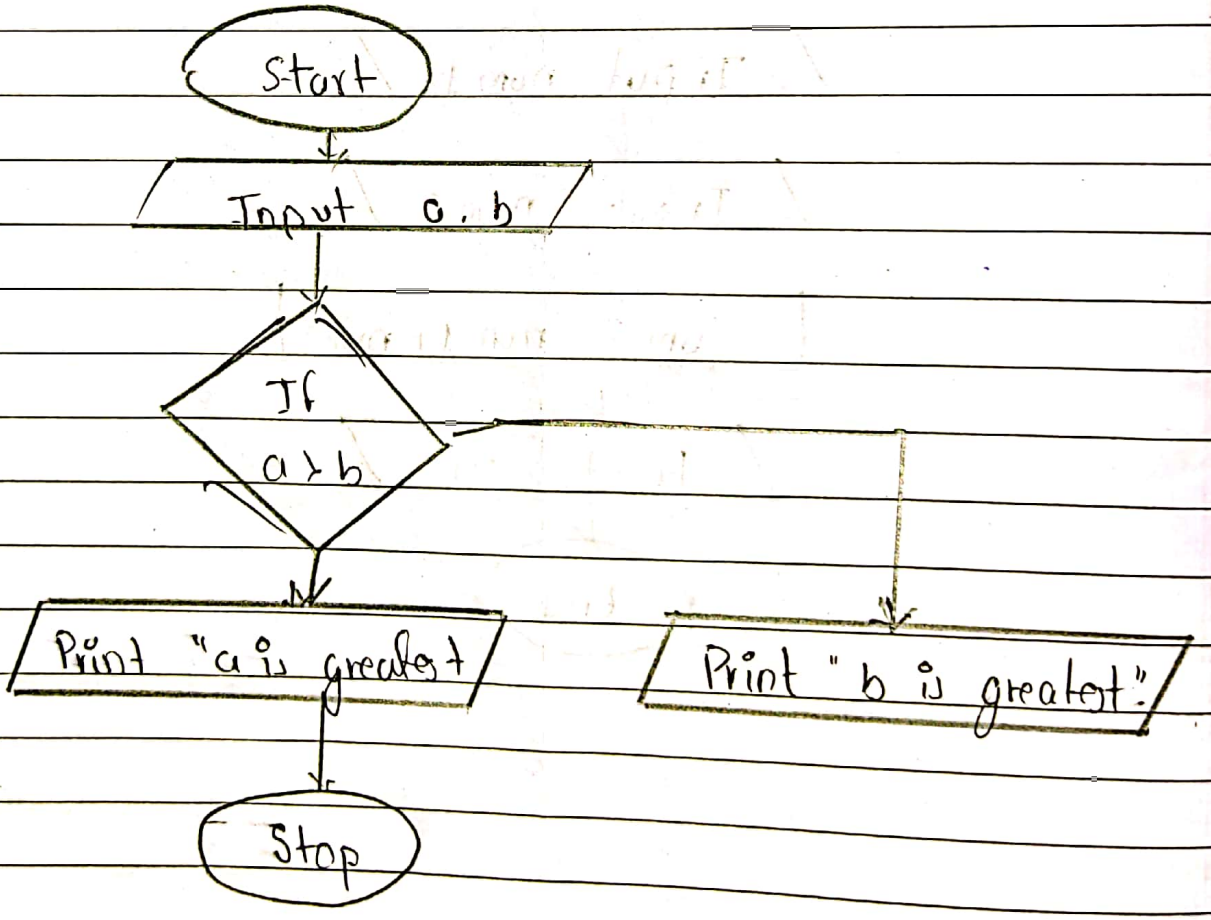
Q.1) WAP & draw flow_chart for finding sum of any 2 nos

Step 1: Start
Step 2: Declare variables sum, num1, num2
Step 3: Input num1, num2
Step 4: Calculate sum = num1 + num2
Step 5: Display sum
Step 6: End.



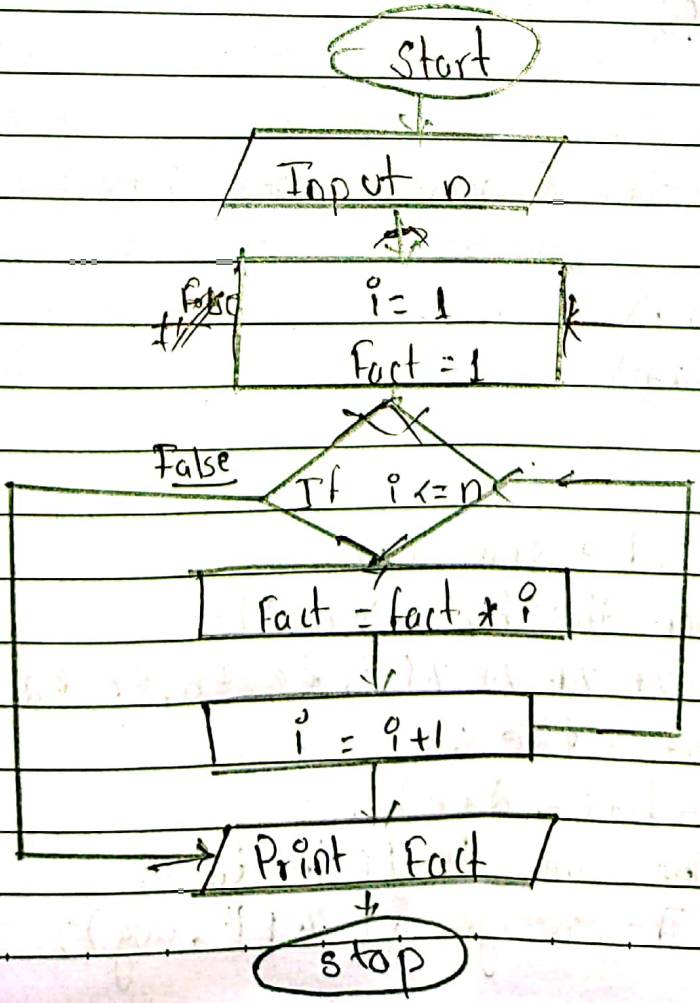
Q. 5) WAA & Flowchart to find largest among 2 nos.

Step 1 : Start
Step 2 : Declare variable a, b.
Step 3 : Input a, b
Step 4 : If a > b then go to step 5
Else
print "b is greatest"
Step 5 : Print "a is greatest"
Step 6 : End



Q.7) Write an Algorithm & Flowchart to find factorial of given no.

Step 1 : Start
Step 2 : Declare n, fact
Step 3 : Input n
Step 4 : Initilize counter variable i to 1 & fact to 1
Step 5 : If i <= n go to step 6.
Else go to step 8
Step 6 : Calculate fact = fact * i
Step 7 : Increment counter variable i & go to step 5
Step 8 : Print fact
Step 9 : stop



Q.11) WAP to find area circle. Ask radius to user & also define value of pi as symbolic const.

```
#include <Math.h>
#include <stdio.h>
#include <conio.h>
#define PI 3.14
int main()
   {
      Float r, A
      Print f("Enter the radius ");
      Scanf ("%.f", &r);
      A= PI * pow (r, 2);
      Print f("The area of circle is %f ", A);
      getch();
      return 0;
      }
```

Q.12) WAP to find sum & average of 5 nos.

```
#include <stdio.h>
#include <conio.h>
int main()
  {
    float a, b, c, d, e, sum, avg;
    Printf ("enter the five number");
    scanf ("%.f %.f %.f %.f %.f", &a, &b, &c, &d, &e);
    sum = a+b+c+d+e;
    avg = (a+b+c+d+e)/5;
    print f ("The sum is %f \n", sum);
    Print f ("The average is %.f", avg);
```

```
    getch();
}
```

Q.15) WAP to convert cartesian co-ordinate to polar co-ordinate.

```
#include <math.h>
#include <stdio.h>
#include <conio.h>
#define PI 3.14
int main()
{
  float x, y, r, theta;
  printf("Enter the cartesian co-ordinate x:");
  scanf("%f", &x);
  printf("Enter the cartesian co-ordinate y:");
  scanf("%f", &y);
  r = sqrt(x*x + y*y);
  theta = atan(y/x);
  theta = (180 * theta) / PI;
  printf("The polar co-ordinate is: r=%f &
      theta = %f", r, theta);
  getch();
  return 0;
}
```

Q.17) WAP to read 3 side of Δ & calculate its area.

```
#include <math.h>
#include <stdio.h>
#include <conio.h>
int main()
{
  float a,b,c,s,A;
  Printf("Enter the 3 side of a triangle ");
  Scanf("%f %f %f",&a,&b,&c);
  s=(a+b+c)/2;
  A=sqrt(s*(s-a)*(s-b)*(s-c));
  Printf("The area of the triangle is %f",A);
  getch();
  return 0;
}
```

Q.19) WAP to enter 4-digit no. & find the sum of last digit of the no.

```
#include <Math.h>
#include <stdio.h>
#include <conio.h>
  int main()
  {
  int num, first digit, last digit;
  Printf("Enter any 4 digit no.");
  scanf("%d",&num);
  first digit = num /1000;
  last digit = num %10;
  int sum = first digit + last digit;
```

```
printf("sum = %d", sum);
getch();
return 0;
}
```

Q.21) WAP ~~to~~ conditional operators to evaluate the following function;

$y = 2.4x + 3$, For $x <= 2$

$y = 3x - 5$, for $x > 2$

```
#include <math.h>
#include <stdio.h>
#include <conio.h>
int main()
{
float x, y;
Print("Enter the value of x:");
ScanF("%f, &x);
x<=2 ? y=2.4*x+3 : y=3*x-5;
printf("%f", y);
getch();
return 0;
}
```

Q.9) WAP to find HCF & LCM of given 2 nos.

```
# include <stdio.h>
# include <conio.h>
 int main()
 {
  int num1, num2, hcf, lcm, i;
  clrscr();
  printf("Enter first no.:");
  scanf("%d", &num1);
  Print f ("Enter second no.:");
  scanf("%d", &num2);
  for (i=1; i<=num1; i++);
   {
    if (num1%i==0 && num2%i==0);
     {
      hcf=i;
     }
   }
  lcm = (num1 * num2)/hcf;
  printf("HCF = %d & LCM = %d", hcf, lcm);
  getch();
   return(0);
}
```