TUTORIAL 3 (SECJ1013)

PROGRAMMING TECHNIQUE 1

SECTION 04 & 07, SEM 1, 2024/2025

Q#1

Determine the output for the program segment given in **Table 1**. Write your output in **Output** column in **Table 1**. ***Note:*** ASCII value of 'A' = 65 and 'd' = 100.

Table 1: Program segment and output for Question 1

Line	Code	Output
1	`int p = 65, q = 100;`	
2	`char x = 'A', y = 'd';`	
3	`bool m = false, n;`	
4		
5	`cout << ((x + 35) == q) << endl;`	_____
6	`cout << (!x || m) << endl;`	_____
7	`cout << (((m + x - 100) < (p + y)) && !m)`	_____
8	`<< endl;`	
9	`n = x + q;`	
10	`q = y + n;`	
11	`y = static_cast <char> (y + 1);;`	
12		
13	`cout << "n = " << n << endl;`	_____
14	`cout << "q = " << q << endl;`	_____
15	`cout << "y = " << y << endl;`	_____

Q#2

Write a code segment based on voting system as shown in **Table 2** using selection statement.

Table 2: Voting system

Age	Voting
0 - 17	Not allowed
18 - 65	Allowed without helper
66 - unlimited	Allowed with helper

The example of outputs for this code segment as shown in **Figure 1**.

Run 1	***Run 2***
`Please enter your age: 16` `You can't vote`	`Please enter your age: 20` `You can vote without helper`
Run 3	***Run 4***
`Please enter your age: 90` `You can vote with helper`	`Please enter your age: 50` `You can vote without helper`

Figure 1: Example of outputs for 4 runs

Q#3

Trace the output of the following program segments:

a)

```
1   int i = 0, j = 1, k;
2
3   while (i < 4) //outer loop
4   {
5     (i > 1) ? j = j * 2 : j = j * 1;
6     for (k = 0; k < j; k++) //inner loop
7        cout << j;
8
9     cout << endl;
10    i++;
11  }
```

b)

```
1   int i = 10, j;
2   while (i > 0)
3   {
4      for (j = 1; j < i; j*=5) //j = j * 5
5      {
6         cout << i << " " << j << endl;
7         if (j > 5)
8            break;
9         else
10           continue;
11     }
13     i -= 3; //i = i - 3
14  }
```

Q#4

You have a program to calculate the total price of fruits. The program will receive item id as a user input. **Table 3** shows the list of fruits. The process to calculate the total price will be repeated until the user enter invalid item id (refer Table 3). Finally, the program will display the total price of fruits. **Figure 2** shows example of output for the program.

Table 3: List of fruits

Item Id	Item Name	Cost per Unit
A	Apple	RM 2.00
O	Orange	RM 2.50
L	Lemon	RM 1.80

```
Enter the item id: A //choice
Enter the quantity of item: 5

Enter the item id: O
Enter the quantity of item: 4

Enter the item id: L
Enter the quantity of item: 3

Enter the item id: K
The total price is: RM25.4
```

Figure 2: Example of outputs for Question 4

Complete and write the code segment of **`main()`** function for the program using:

a) Post-test loop and **`if`** statement

```
int main()
{
    char choice;
    int qty;
    float price, tot_Price = 0;









    return 0;
`
```

b) Pre-test loop and **`switch`** statement

```
int main()
{
    char choice;
    int qty;
    float price, tot_Price = 0;









    return 0;
}
```

Q#5

Determine the output for code segment below:

```
1   int x = 3, y = 5;
2   char code = 'A', code2 = 'S';
3   bool p = false;
4   bool q;
5
6   cout << ((x + 3) > (y + 5)) << endl;
7   cout << (((p != 0) + 10) && ((p + 10) == 10)) << endl;
8   cout << ((code == 'C') || (code2 != 'S')) << endl;
9   q = x - y;
10  x = q + 1;
11  cout <<"The value of q is " << q <<endl;
12  cout <<"The value of x is " << x <<endl;
```

Q#6

The following code segment is meant to determine the price of a pineapple based on its grade. Convert the **`if-else`** statement (lines 8 – 16) using the **`switch`** statement.

```
1   char grade;
2   double price;
3
4   cout << "Our pineapple has three grades:\n ";
5   cout << "A, B, and C. Which do you want pricing for? ";
6   cin >> grade;
7
8   if (grade == 'A' || grade == 'a')
9     price = 50.00;
10  else if (grade == 'B' || grade == 'b')
11    price = 30.00;
12  else if (grade == 'C' || grade == 'c')
13    price = 15.00;
14  else
15    cout << "Invalid grade.";
16  //end for if
17  cout << grade << " grade pineapple is RM" << price
18       << "per kilogram.\n ";
```

Q#7

Table 4 shows the rate of telephone calls for a telecommunication company.

Table 4: Call charges rate

Starting Call Time	Calling Rate (RM per Minute)
00:00 – 06:59	0.12
07:00 – 19:00	0.55
19:01 – 23:59	0.35

The program input for call time is a floating-point number in the form of `HH.MM`. For example:

`07:00` hours should be entered as `07.00`

`16:28` hours should be entered as `16.28`

Assume that the code for getting user inputs has been taken care in the program. Also, the related variables have been declared as follow:

```
float call;           // call time
float rate;           // rate (RM per minute)
float minute;         // minute
```

i. Based on the **Table 4** information, write the C++ code segment that implements the process to determine the calling rate.

ii. Write the code segment that implements input validation so that the program should not accept times that are greater than 23:59.

For example;

Input (Call):
`25.35`

Output:
`Your call time is invalid`

iii. Write the code segment that implements input validation so that the program should not accept input whose last two digits are greater than 59.

Notes:

- Apply type casting to split the call input into **hour** and **minutes**.
- The formula to calculate minutes:

minutes = (call - hour) * 100

For example;

Input (Call):
`23.75`

Output:
`You must enter minute less than 59`

Q#8

Given the following program, fill in the blanks in **Table 5**, if the user input is as follows:

95 35 -1 70 65

```
1   #include <iostream>
2   using namespace std;
3
4   int main()
5   {
6      int mark = 0, tolMark = 0, testNo = 0;
7      float average = 0.0;
8
9      do
10     {
```

```
11          cout << "Enter mark: ";
12          cin >> mark;
13
14        if ((mark < 0) || (mark > 100))
15            cout << "Invalid input" << endl;
16        else
17        {
18            tolMark += mark; //tolMark = tolMark + mark;
19            testNo++; //testNo = testNo + 1;
20        }
21    } while (testNo < 4);
22
23    average = static_cast<float>(tolMark) / testNo;
24    cout << "Average: " << average;
25
26    return 0;
27 }
```

Table 5

mark	tolMark	testNo	average	output
95				
35				
-1				
70				
65				
-				

Q#9

Given a flowchart in **Figure 3**. Write the code segment (**`main()`** function) using a pre-test loop.

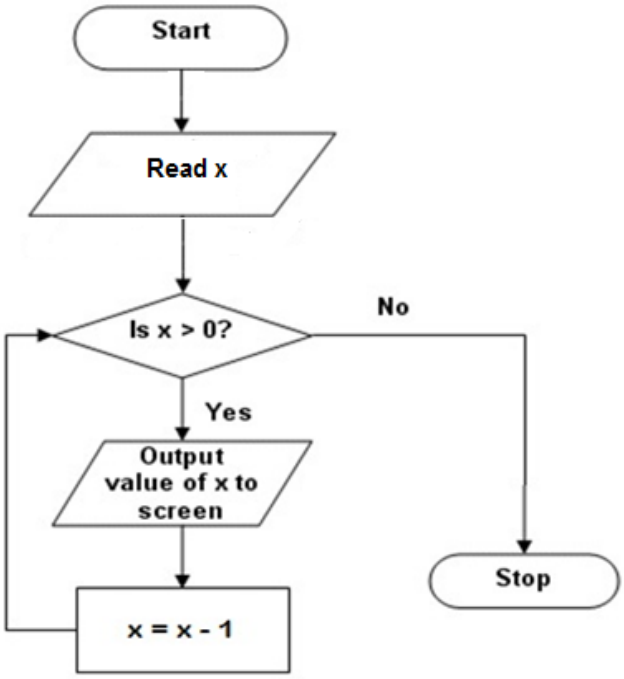


Figure 3

Q#10

Determine the output for each code segment below:

a)

```
1  int  n1 = 5, n2 = 10;
2  char code = 'A',code2 = 'Z';
3  bool t = true;
4
5  cout << (n1 + 3 == n2 + 5) << endl;
6  cout << ((n1 <= 5) && (n2 >= 10)) << endl;
7  cout << ((code == 'T') || (code2 != 'B')) << endl;
8  cout << ((t!=0) + 2 < 10) << endl;
```

b)

```
1  bool b;
2  int x;
3  int y = 7;
4  b = y;
5  x = b;
6
7  cout <<"The value of x is " << x <<endl;
8  cout <<"The value of b is " << b <<endl;
```

Q#11

Determine the output of each code segment below for the given value of **`val = 4`**.

a)

```
1  int found = 0, count = val;
2
3  if (--count || !found == 0)
4  cout<< "danger" <<endl;
5  cout<< "count = " << count <<endl;
```

b)

```
1  switch (val)
2  {
3      case 10:
4        cout<< "Perfect ";
5        break;
6      case 8:
7        cout<< "Satisfactory ";
8        break;
9      default:
10       cout<< "Unsatisfactory";
11 }
12 cout<< " : Pair Programming Evaluation";
```

Q#12

Complete program below to test the value of **a** and the program should display as below.

The given value is positive or
The given value is negative or
The given value is zero

```
int a; int b;

cout << "Please enter the value to be tested: ";
cin >> a;

 (a >= 0) ? (b = 1) : (b = 2);

  switch (b)
    {









    }
```

Q#13

Based on the code given in Table 6,

Table 6

Line	Program Segment
1	`#include <iostream>`
2	`using namespace std;`
3	`int main()`
4	`{ for (int i = 5; i > 0; i =- 2)`
5	`{ for (int j = 0; j =< i; j++)`
6	`{ if (j%2)`
7	`continue;`
8	`else`
9	`if !(j)`
10	`cout << "i = " << i`
11	`<< ", j = << " j << endl;`
12	`else`
13	`break;`
14	`}`
15	`}`
16	`return 0;`
17	`}`

a) Identify and fix the 4 errors in the code by writing the corrected statement in Table 7.

Table 7

Line	Corrected Statement

b) Assuming the errors are fixed, what is the output of the code?

Q#14

Given a flowchart in Figure 4. Complete and write the code segment of the flowchart using:

i. for loop statement

```
int weightCounter, totalWeight = 0;
cout << "Enter the number of students:  ";
cin >> weightCounter;









 return 0;
```

ii. post-test loop statement

```
int weightCounter, totalWeight = 0;
cout << "Enter the number of students:  ";
cin >> weightCounter;









 return 0;
```

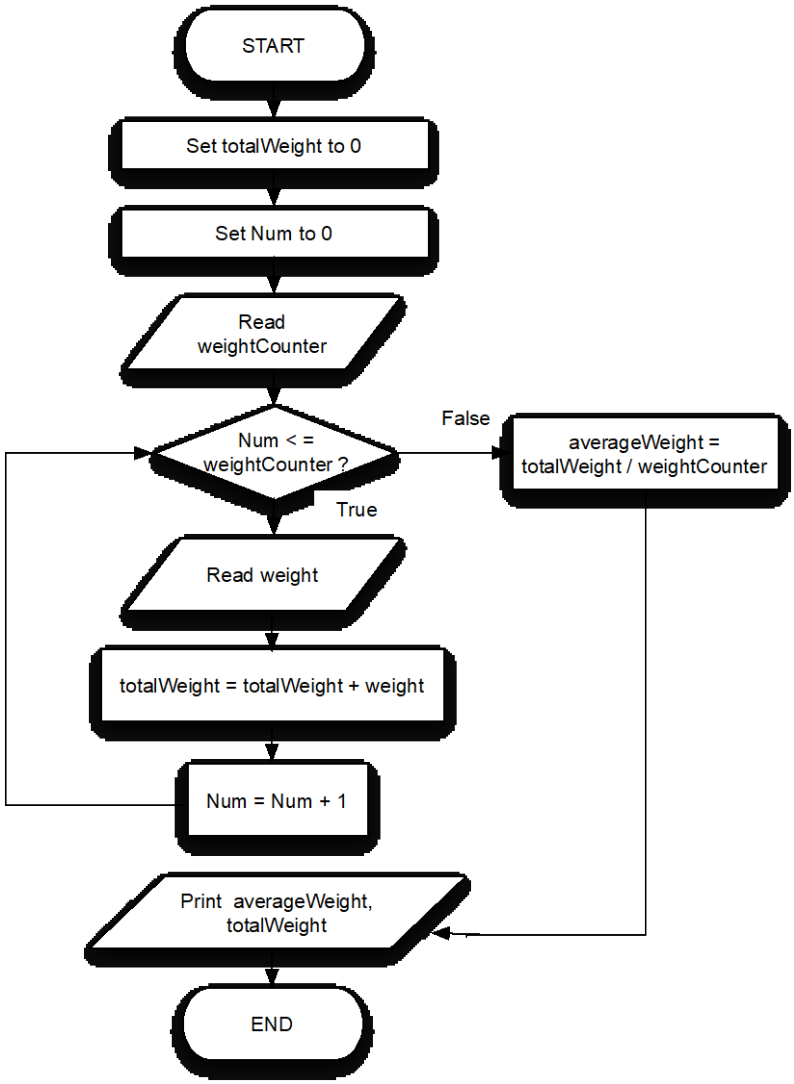


Figure 4

Q#15

You are given a description for constructing conditional statement. Complete the given column with an appropriate statement.

	Description	**Conditional Statement**
i.	Assign 0 to `z` if `a` is less than 10, otherwise it should assign 7 to `z`.	
ii.	Assign the result of `base` x 10 to `population` if `temp` is greater than or equal to 45, otherwise it should be assigned with `base` x 2.	
iii.	Assign `max` with `n1`, if `n1` is greater than `n2`. Otherwise `max` will be assigned with `n2`.	

Q#16

You are given a description in order to create a C++ code. Provide a suitable C++ statement in the given column.

	Description	**C++ Statement**
i.	Determine if `count` is not greater than 20	
ii.	Determine if `count` is within the range of 0 through 100.	
iii.	Determine if `count` is outside the range of 0 through 100.	

Q#17

Determine the output of each code segment below (if any) for the given value of *n.* **Notes:** Write the text "<NO OUTPUT>", if the code does not print anything.

a)

```
1  if (n >=0)
2              if (n<=10)
3                     cout << "Hello ";
4              else
5                     cout << "Hi ";
6              cout << "World ";
```

n	**Output**
-1	
1	
11	

b)

```
1  switch (n)
2  {
3        case 3 : cout << "Welcome To ";
4        case 2:  cout << "The World Of ";
5        case 1:  break;
6        case 0:  cout << "Computer Programming ";
7  }
```

n	**Output**
0	
1	
3	

c)

```
1   cout << ( n%2==0 ?  n*10 : n + 10 );
```

n	Output
1	
2	
3	

Q#18

Given a flowchart in **Figure 5**. Write the code segment for the shaded part of the flowchart using:

i. the `if` statement

ii. the `switch` statement

Notes: Use a separate code segment for each question.

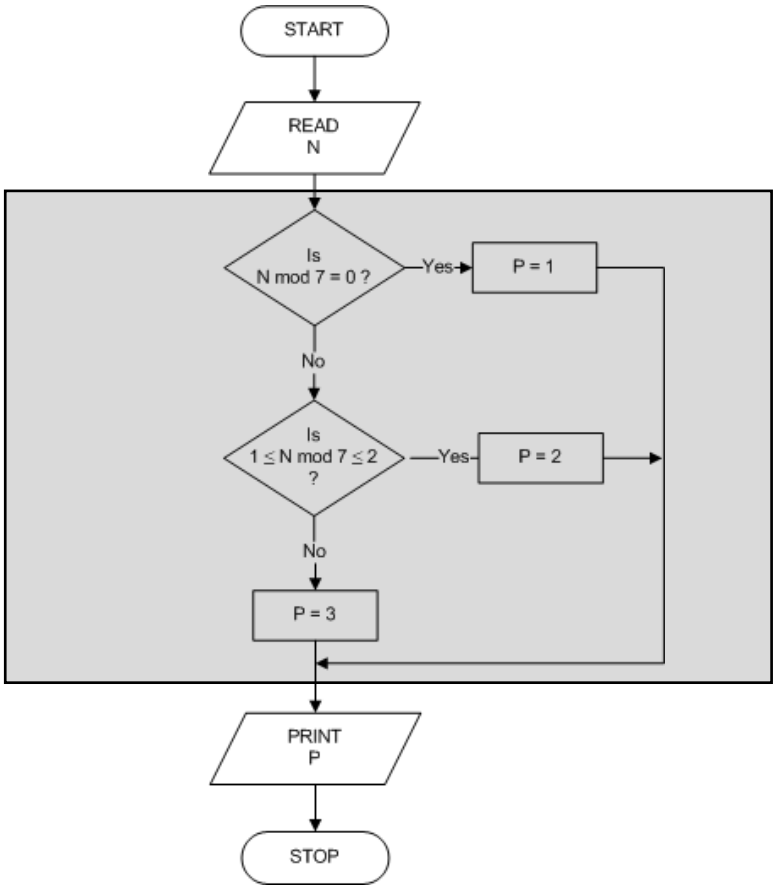


Figure 5

Q#19

Determine the output for each code segment below:

a)

```
1  int n;
2  for (n=110; n<200; n+=10) {
3        if (n == 120 || n==150) continue;
4        cout << n << endl;
5
6        if (n > 160) break;
7  }
8  cout << "The last value of n is " << n << endl;
```

b)

```
1  for (int i=1; i<4; i++) {
2        int j=i;
3        while (j>0) {
4              cout << "i=" << i <<"   j=" << j<< endl;
5              j--;
6        }
7  }
```

Q#20

Rewrite the following code fragment so that it uses a `while` loop to accomplish the same task.

```
1  int n;
2  do
3   {
4     cout << "Enter a non-negative integer: ";
5     cin >> n;
6     if (n < 0)
7       cout << "The integer you entered is negative." << endl;
8   } while (n < 0);
```

Q#21

Write the corresponding conditional expression for the following `if..else` statements.

	`if..else` statement	**Conditional expression**

i.	`if (score >= 50)`
	`{  numPass++;`
	`  cout<<"Pass";  }`
	`else`
	`{  numFail++;`
	`  cout<<"Please try again."; }`	

ii.	`if (cpa >= 2.0)`
	`{  if (cpa >= 3.5)`
	`  status = "Dean's List";`
	`  else`
	`  status = "Normal Pass"; }`
	`else`
	`{  if (cpa >= 1.7)`
	`  status = "Probation";`
	`  else`	

	`status = "Fail";  }`	

iii.	`if (x == y)`
	`  q = 0;`
	`else`
	`  q = 1;`	

iv.	`if (x<y)`
	`  q = a + b;`
	`else`
	`  q = x * 2;`	

Q#22

Write C++ **`if`** statement code fragments to satisfy the given conditions.

a) Check the range of frequency, **`freq`** to be between 100Hz and 10000Hz. Display **`"Acceptable"`** if within the range and **`"Unacceptable"`** if not.

b) Check the prerequisite for a soldier candidate to be of **`age`** between 18 to 30 years, **`weight`** between 50 to 65kg and **`height`** must be greater than 156m. Display **`"Fulfill requirements"`** or **`"Do not fulfill requirements"`** based on these conditions.

c) Henry wants to buy a car. It must be under one of these conditions. Either:
   (i) The **`year`** made: after 2010, cylinder capability: **`cc`** between 1.5 to 2.0.
   or
   (ii) The **`year`** made: before 2010 , cylinder capability: **`cc`** greater than 2.0.

   Display buy or not buy necessarily in the code.

Q#23

What is the output for the following code excerpts?

a)

```
1  int n = 0;
2  if (n = 0)
3     cout << "Yes";
4  else
5     cout << "No";
```

b)

```
1  int i=10, j=3, k=20;
2  cout << ((j < 4 )|| (j == 5) && (i <= k));
```

c)

```
1  int x = 13, y = 9;
2  if (x >= y)
3     if (y > 0)
4        x = x * y;
5     else if (y < 4)
6           x = x - y;
7  cout << x;
```

d)

```
1  int x = 25;
2  if (x >= 12)
3    cout<<"Mid";
4  cout<<"Term";
```

e)

```
1  int x = 25;
2  if (x / 2 == 12){
3    cout<<"Mid";
4    cout<<"Term";
5  }
6  else
7  {
8    cout<<"TP1";
9    cout<<"C++";
10 }
```

Q#24

a) Complete the portion of the program in order to display the output as shown below and show your work in the space given.

```
1  int x =  _____________________   ;              //(a)
2  do {
3     x--; //14 //13 //12
4     if (x % ___________  == _________ )  // (b) and (c)
5        continue;
6     cout << x << ", ";
7  } while (x >= ____________________ );         // (d)
```

Output:

```
14, 12, 10, 8, 6, 4, 2, 0, -1, -2
```

b) According to the portion of the program above, if x = 4, display the output.

c) The table shows the portion of the program using loop instruction. Rearrange this program in order to display the output as shown below.

```
1  } while (y>1);
2  cout << y << ", ";
3     y *= 2;
4  do {
5  if (y > 1024) break;
6  int y=2;
```

Output:

```
2, 4, 8, 16, 32, 64, X, Y, 512, 1024,
```

d) What is the value of X and Y ?

e) According to the portion of the program above, if y = 200, display the output.

Q#25

Based on the flowchart given in **Figure 6**, answer parts (i) to (iii) of this question.

i. Convert the given flowchart into its equivalent C++ code excerpt.
ii. How many times the loop repeats?
iii. Modify your code by using decrement counter loop without changing the variables and the number of loops involved.

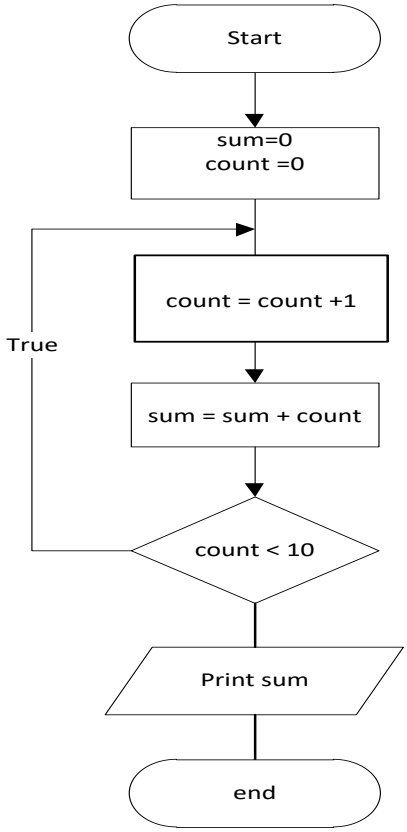


Figure 6

Q#26

Based on the code except, identify whether the program can execute. If you identify the code will produce error, give one sentence to explain the error. The first question has been done for an example.

Code	Can the program execute		Output	Error Description
	Yes	No		
Example: x=1 **cout<<x;**		√	-	**x=1 has no semicolon**

`int age=55;`
`if ( age >= 65 );`
`cout << "Age is greater than or equal to 65" << endl;`				

`int x=8, total=0;`
`  while (total <= 10)`
`  total += x;`
`  x++;`
`  cout<<x;`				

`int x;`
`  for (x = 3, x >= 1, x--)`
`  cout << x << endl;`				

`int grade = 95;`
`  if (grade>90)`
`  cout<<"Excellent"<<endl;`
`  else;`
`  cout<<"Good"<<endl;`				

`int test = 1;`
`switch (value % 2)`
`{`
`  case 0: cout << "Even integer";`
`  case test: cout << "Odd integer";`
`}`				

`counter = 2;`
`do`
`{`
`  cout << counter << endl;`
`  counter += 2; }`
`While ( counter < 100 );`				

`int n=4;`
`  if (!n%2)`
`  cout<<"this is true";`
`  else`
`  cout<<"this is false";`				

`int MyNumber = 1;`
`int count;`
`for (count =1; count<=(MyNumber + 1);`
`count++)`
`  cout<<count<<" "<<MyNumber<<endl;`				

Q#27

`Program 3` is able to count the number of input character of **`A`**, **`B`** and **`C`**. The program will loop reading the input until the sentinel value **`e`** is being input. The sample output of the program is as shown in **Figure 7**.

```
Enter the letter grades[Enter 'e' character  to end input]
A
Enter the letter grades[Enter 'e' character  to end input]
B
Enter the letter grades[Enter 'e' character  to end input]
C
Enter the letter grades[Enter 'e' character  to end input]
C
Enter the letter grades[Enter 'e' character  to end input]
C
Enter the letter grades[Enter 'e' character  to end input]
e

Totals for each letter grade are:
A: 1
B: 1
C: 3
```

Figure 7

Complete **`Program 3`** based on the comments given:

```
1   //Program 3
2   #include <iostream>
3   using namespace std;
4
5   int main()
6   {
7      char grade;     // one grade
8      int aCount = 0; // number of characterAs
9      int bCount = 0; // number of Bs
10     int cCount = 0; // number of Cs
11
12     cout << "Enter the letter grades[Enter 'e' character  to end
13     input]"<< endl;
14     cin>>grade;
15
16     // write while loop with condition input not equals to 'e'
17     _____________________________ {      // (a)
18
19
20     //write switch statement for grade
21     ____________________________   {         // (b)
22
23     //in case of input A, increment variable aCount
24
25     __________:                            // (c)
26                ____________________________  // (d)
27                ____________________________  // (e)
28
29     //in case of input B, increment variable bCount
30
31     __________:                            // (f)
32                ____________________________  // (g)
```

```
33                  _____________________________  // (h)
34
35      //in case of input C, increment variable cCount
36
37      __________:                              // (i)
38                  _____________________________  // (j)
39                  _____________________________  // (k)
40
41      //add default statement to catch all other alphabets and prints
42      //"Incorrect letter grade entered."
43
44      __________:                                    // (l)
45            ___________________________________      // (m)
46            ___________________________________      // (n)
47      } // end switch
48
49      //ask for another input letter grades
50      ____________________________________________________  // (o)
51      ____________________________________________________  // (p)
52      } // end while
53
54      // output summary of results
55      _________________________  // (q) display number of A grades
56      _________________________  // (r) display number of B grades
57      _________________________  // (s) display number of C grades
58
59      return 0;
60    } // end function main
```

Q#28

Given the following declaration, identify the output for the statements:

Boolean expression	Output

`const int MAXSCORE = 100;`
`char MI = 'L',`
`MI2 = 'g';`
`int Quiz1 = 18,`
`Quiz2 = 6;`
`int Score1 = 76,`
`Score2 = 87;`
`string Name1 = "Fred", Name2 = "Frodo";`	

`cout<<(Quiz1 == Quiz2)<<endl;`	
`cout<<(Score1 >= Score2) <<endl;`	
`cout<<(Score1 > MAXSCORE) <<endl;`	
`cout<<((Score1 + Quiz1) <= (Score2 + Quiz2))<<endl;`	
`cout<<(MI == MI2) <<endl;`	
`cout<<(MI < MI2) <<endl;`	
`cout<<('Z' < 'a') <<endl;`	
`cout<<(Name1 < Name2) <<endl;`	
`cout<<!(Score1 > Score2)<<endl;`	
`cout<<!(Name1 < Name2) <<endl;`	

Q#29

Based on the flowchart given in **Figure 8**, answer parts (i) to (iii) of this question.

i. Convert the given flowchart into its equivalent C++ code excerpt.
ii. How many times the loop repeats?
iii. Modify your code by using decrement counter loop without changing the variables and the number of loops involved.

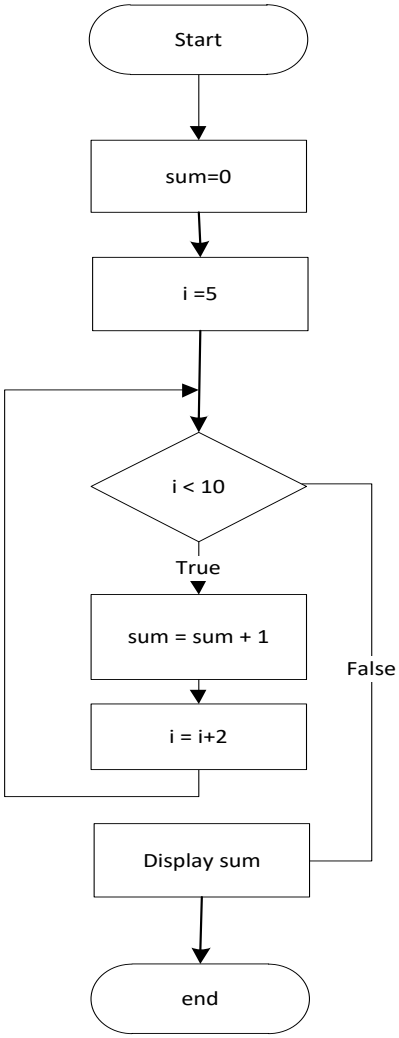


Figure 8

Q#30

The factorial of a number ***n*** is the product of all number from 1 up to the number ***n***. Using the ***for*** statement, write a code segment that prints the factorial of an integer number. The factorial of an integer number ***n*** is shown in the mathematical form below.

$$n! = \prod_{k=1}^{n} k$$

For example the factorial of number 5 is

$$5! = 5 * 4 * 3 * 2 * 1 = 120$$

The expected output :

```
Enter Number To Find Its Factorial : 5
5*4*3*2*1=120
This is factorial for 5
```

Note: *Complete your answer here*

```
int num, factorial=1;
cout << "Enter Number To Find Its Factorial : ";
cin >> num;
```

Q#31

Using the **`while`** statement, write a code segment to print the ***n***-th number in the Fibonacci series. The Fibonacci series of numbers are

0, 1, 1, 2, 3, 5, 8, 13, 21, ….

By definition, the first two numbers in the Fibonacci sequence are either 1 and 1, or 0 and 1, depending on the chosen starting point of the sequence, and each subsequent number is the sum of the previous two. The value of the first two numbers should be obtained from the user input. Assume, $n = 6$, so to generate ***6***-th number in the Fibonacci series when the first number is 4 and the second number is 6:

4, 6, 10, 16, 26, 42

The expected output :

```
Enter the number of series you want :
6
Enter the first number you want :
4
Enter the second number you want :
6

This is first 6 terms of Fibonacci series are :
4
6
10
16
26
42
```

This is portion of program, please complete the program.

```
1  int n, c, first, second, next;
2
3  cout << "Enter the number of series you want" << endl;
4  cin >> __(a)__ ;
5  cout << "Enter the first number you want : " << endl;
6  cin >> __(b)__ ;
7  cout << "Enter the second number you want : " << endl;
8  cin >> __(c)__ ;
9
10 cout << "First " << __(d)__ << " terms of Fibonacci series are :- "
11 << endl;
12
13 __(e)__ =0;
14 while (c<n)
15 {
16   if ( __(f)__ == 0 )
17           __(g)__ = first;
18   else if ( __(h)__ == 1)
19          next = __(i)__ ;
20   else
21       {
22          next = __(j)__ + second;
23          first = __(k)__ ;
24          __(l)__ = next;
25       }
26   cout << __(m)__ << endl;
27   __(n)__ ++;
28 }
```

Q#32

Complete this program based on the instruction given:

```
1  //Program C.2
2  //Includes suitable library
3  _____________________________
4  _____________________________
5
6  //get the first number from the user
7  using namespace std;
8
9  #define LOW 32
10 #define HIGH 212
11 #define EXIT -99
12
13 int main()
14 {
15    int userVal, betweenCnt = 0, extremeCnt = 0, sum = 0;
16    double avg;
17
18    cout << "Enter a number (" << -99 << " to quit):";
19    cin >> userVal;
```

```
20
21      //write a while loop where the condition is the user did not
22      //enter a sentinel value. If the user's value is not between LOW
23      //and HIGH, then increment the extremeCnt values. Otherwise, add
24      //the user's value to variable sum and increment the count of
25      //variable betweenCnt. Then get the next number from the user.
26
27      ____________________________________________________________________
28      ____________________________________________________________________
29      ____________________________________________________________________
30      ____________________________________________________________________
31      ____________________________________________________________________
32      ____________________________________________________________________
33
34      //If the user entered at least 1 valid number, calculate the
35      //average and then display it and the number of extreme values
36      //that were entered.
37
38      ____________________________________________________________________
39      ____________________________________________________________________
40      ____________________________________________________________________
41      ____________________________________________________________________
42      ____________________________________________________________________
43
44      return 0;
45  }//end main
```

Q#33

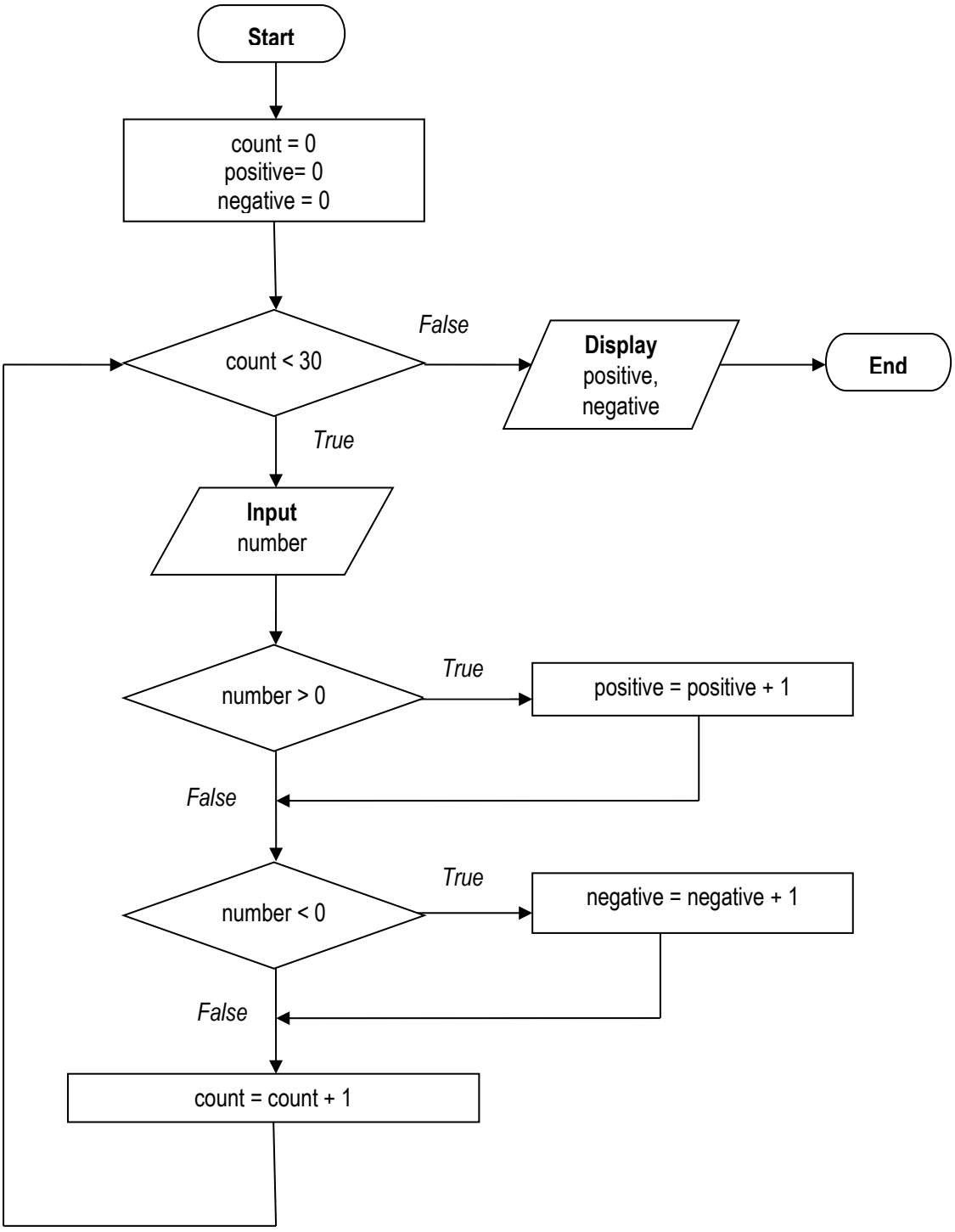
The Flowchart 1 presents an algorithm of a program that counts the number of positive and negative numbers entered by the user. The user will enter 30 numbers. Translate the flowchart into its corresponding C++ program using an appropriate loop statement. Write your answer by completing the **Program C.1** and show your output.

```
// Program C.1
#include <iostream>
using namespace std;

int main()
{
     int count = 0;         // The total count of numbers entered
     int positive = 0;      // The count of positive numbers
     int negative = 0;      // The count of negative numbers
     int number;            // The number entered




    return 0;
}
```


Start
count = 0
positive= 0
negative = 0
count < 30
False
Display
positive,
negative
End
True
Input
number
number > 0
True
positive = positive + 1
False
number < 0
True
negative = negative + 1
False
count = count + 1

Flowchart 1