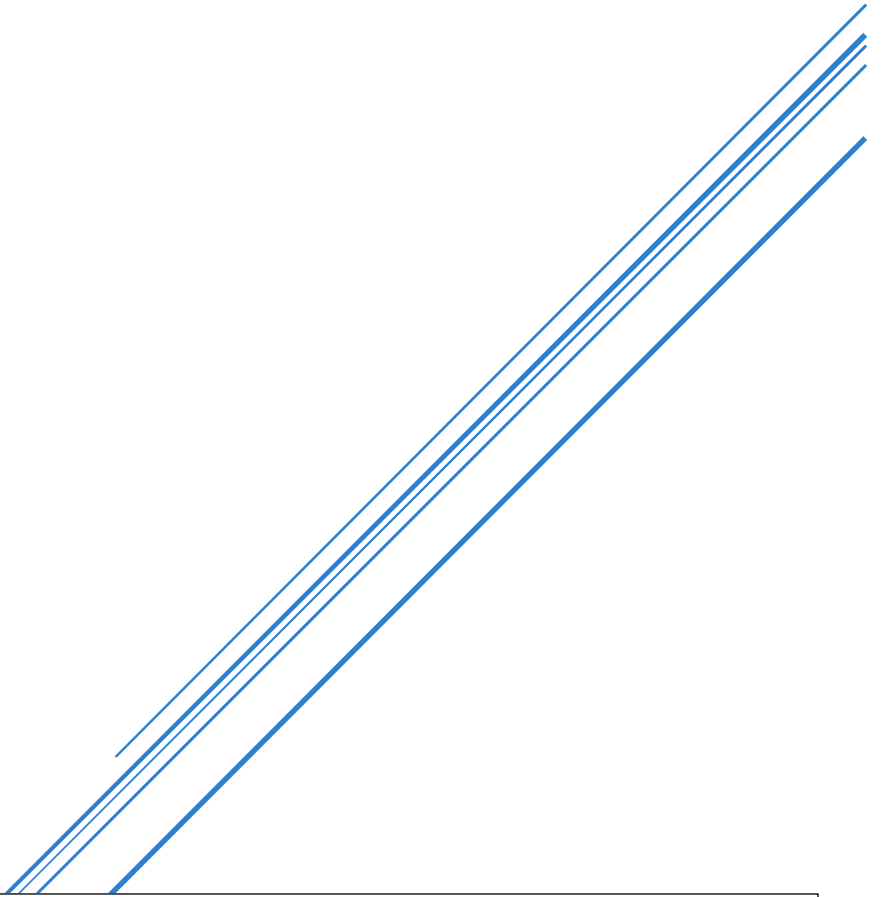




# FIRST QUIZ QUESTION BANK

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♦ ملاحظة قبل ما تبش:

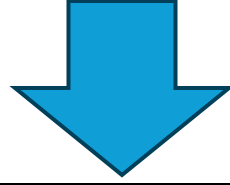
هاي الأسئلة انكتببت عشان تساعدك وتخليك تراجع المادة بأفضل طريقة. خذ وقتك، حلهم كلهم، حتى لو حسيت بعضهم صعب... لأن كل سؤال هون رح يرفع مستواك ويحسنك أكثر وأكثر.  .  
كمل للنهية... وخليك واثق إن تعبك هون رح يثمر بالامتحان! 

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رابط قناتي على يوتيوب:



اشترك الان



## Question 1

What is the output of the following code if the input is “728.914”?

```
string word;  
char symbol;  
int num;  
cin >> num >> symbol >> word;  
cout << symbol << "\t" << num << "\n" << word;
```

Output:

```
.    728  
914
```

## Question 2

What is the value stored in the variable `b` after executing the following code?

```
int a = 4, b = 6;  
b -= a + 2 - b * a++ % 7 - 3 / (--b + 1);  
cout << b++;
```

->> b= 6

### Question 3

What is the output of the following code?

```
int *ptr, v = 15;  
ptr = &v;  
*ptr+= v+ 8;  
cout << v;
```

Output: 38

### Question 4

What is the output of the following code?

```
int *ptr1, *ptr2, v = 0;  
ptr1 = ptr2 = &v;  
(*ptr1)++;  
(*ptr2)++;  
v++;  
cout << ++v;
```

Output: 4

### Question 5

What is the output of the following code?

```
int m = 8, n = 5, sum = 0;  
sum += n-- + 2 + (++m * 4) % 5;  
cout << sum;
```

Output: 8

### Question 6

What is the output of the following code?

```
cout << 1234 << "\r" << "\b" << 567;
```

Output: 5674

### Question 7

What is the output of the following code?

```
bool flag = false;  
float price = 45.99;  
char letter = 'A';  
cout << flag << "\t" << (int)price << "\t" << (int)letter <<  
"\n";
```

Output:

0                      45                      65

## Question 8

What is the program output:

```
int p, q;  
string s;  
cin >> p >> q;  
getline(cin, s);  
cout << p << q << "|" << s;
```

if the **Input is :**

5 8

Programming C++

- A) 58|Programming C++
- B) 58| C++
- C) 58|
- D) 5 8|Programming C++
- E) Error

**Correct: C** (the leftover newline causes empty s)



## Question 9

What's printed?

```
double d; char ch;  
cin >> d;  
cin.get(ch);  
cout << d << "/" << (int)ch;
```

if the **Input is: 2.5A**

- A) 2.5/a
- B) 2.5/A
- C) 2.5/0
- D) 2.5/65
- E) Error

**Correct: D** (ch is newline ASCII 65 after reading 'A', so likely 65)

## Question 10

What is the program output?

```
double n = 9.9999;  
cout << fixed << setprecision(2) << n;
```

- A) 10.00
- B) 9.99
- C) 9.9999
- D) 9.100
- E) 9.99

**Correct: A** (rounded to two decimals)

## Question 11

Which header and class is correct for reading from a file?

- A) <ifstream> and ofstream
- B) <fstream> and ifstream
- C) <iostream> and fstream
- D) <fstream> and ofstream
- E) <fstream> and fstream

**Correct: B**

## Question 12

What is the program output? if the Input is :

Z Hello World

```
char c;  
string line;  
cin >> c;  
getline(cin, line);  
cout << c << "|" << line;
```

Output is?

- A) Z|Hello World
- B) Z| World
- C) Z||Hello World

D) Z| Hello World

E) Error

**Correct: D** (line starts with the space)

### Question 13

What is the program output?

```
double v = 1.2;  
cout << v << " ";  
cout << showpoint << v << " ";  
cout << fixed << setprecision(4) << v;
```

Correct output?

A) 1.2 1.20000 1.2000

B) 1.2 1.2 1.2000

C) 1.2 1.20000 1.2000

D) 1.2 1.20000 1.2

E) 1.2 1.2 1.2

**Correct: C**

## Question 14

**What is the output?**

**Input:**

A 100#

```
char x, y;  
int num;  
cin >> x >> num;  
cin.get(y);  
cout << x << "-" << num << "-" << (int)y;
```

A) A-100-65

B) A-100-35

C) A-100-y

E) A-100-#

**Correct answer: B**

## Question 15

**What is the output? if the Input is :**

55

Nice course!

```
int id;  
  
string comment;  
  
cin >> id;  
  
getline(cin, comment);  
  
cout << id << "-" << comment;
```

- A) 55-0
- B) 55- Nice
- C) 55-
- D) 55- course
- E) 55-32

**Correct answer: C**

## Question 16

What is the output that will be stored inside output.txt?

**Assume the content of input.txt is:**

**Ali Ahmad**

**22**

```
ifstream inFile;  
ofstream outFile;  
string name;  
int age;  
inFile.open("input.txt");  
outFile.open("output.txt");  
getline(inFile, name);  
inFile >> age;  
outFile << name << age;  
inFile.close();  
outFile.close();
```

- A) Ali Ahmad  
22
- B) Ali  
22
- C) Ali Ahmad22
- D) Ali22
- E) Error: file not found

**Correct Answer: C**

## Question 17

**What will be printed on the screen? And what are the final values of the variables?**

```
int a = 3, b = 4;

a++;

b--;

if ( (a > 3 && b < 5) || (a == b) ) {

    a += 2;

    b += a;

} else {

    a -= 1;

    b -= 2;

}

cout << a << " " << b;
```

- A) **6 9**
- B) 4 2
- C) 6 10
- D) 3 1

**Correct answer: A)**

---

## Question 18

**What will be printed on the screen? And what are the final values of the variables?**

```
int x = 5, y = 2;

x--;

y++;

if ( (x < 6 || y >= 3) && (x != y) ) {

    x = x + y;

    y = x - y;

} else {

    x = x - y;

    y = y + 1;

}

cout << x << "-" << y;
```

A) 7-2

B) **7-4**

C) 3-1

D) 8-3

**Correct answer: B)**



## Question 19

**What will be printed on the screen? And what are the final values of the variables?**

```
int m = 2, n = 3;
if ( (m++ > 2) && (++n > 3) ) {
    m = m + n;
} else {
    m = m - n;
}
cout << m << "," << n;
```

- A) 1,3
- B) **0,3**
- C) 6,4
- D) 2,4

**Correct answer: B)**

## Question 20

**What will be printed on the screen? And what are the final values of the variables?**

```
int p = 0, q = 5;
if ( (q-- > 3) || (++p > 0) ) {
    q = q + p;
} else {
```

```
p = p + q;  
}  
cout << p << ":" << q;
```

- A) 0:4
- B) 1:5
- C) 1:6
- D) 0:6

**Correct answer: A)**

## Question 21

**What will be printed on the screen? And what are the final values of the variables?**

```
int a = 4, b = 4, res;  
a++;  
b--;  
res = ( a > b ? ( a + b ) : ( a - b ) );  
if ( res >= 8 && a == 5 ) {  
    b += 2;  
} else {  
    b -= 1;  
}  
cout << res << "#" << b;
```

A) 8#5

B) 9#6

C) 0#3

D) 7#4

**Correct answer: A)**

## Question 22

**What will be printed on the screen? And what are the final values of the variables?**

```
int x = 1, y = 6, z;  
x += 2;  
y--;  
z = ( (y > x) ? (y - x) : (x - y) );  
if ( (z < 5 && y > 2) || (x == 3) ) {  
    x = x + z;  
    y = y - 1;  
} else {  
    x = x - z;  
    y = y + 1;  
}  
cout << x << " " << y << " " << z;
```

A) 3,6,5

B) 2,3,4

C) 5,4,2

D) 5,2,4

**Correct answer: C)**

### Question 23

**What will be printed on the screen? And what are the final values of the variables?**

```
int x = 2, y = 3;
x++;
y--;
switch (x + y) {
    case 4:
        y += 2;
        break;
    case 5:
        x += y;
        y = x - y;
        break;
    default:
        x = x - y;
        y = y + 1;
}
```

```
cout << x << " " << y;
```

A) 3 2

B) **5 3**

C) 5 4

D) 2 1

**Correct answer: B)**

## Question 24

**What will be printed on the screen? And what are the final values of the variables?**

```
int a = 1, b = 4;
```

```
a += 2;
```

```
b--;
```

```
switch (b - a) {
```

```
    case 1:
```

```
        a = a + b;
```

```
        break;
```

```
    case 0:
```

```
        b = b - a;
```

```
        break;
```

```
    default:
```

```
        a++;
```

```
        b++;
```

```
}  
cout << a << "-" << b;
```

- A) 3-0
- B) 3-2
- C) 5-4
- D) 2-5

**Correct answer: A)**

## Question 25

**What will be printed on the screen? And what are the final values of the variables?**

```
int m = 3, n = 1;  
m--;  
n += 2;  
switch (m) {  
    case 2:  
        n++;  
    case 3:  
        m += n;  
        break;  
    case 1:  
        m = m - n;  
        break;
```

```
default:
    n = n - m;
}
cout << m << "," << n;
```

A) 2,3

B) 1,2

C) **6,4**

D) 3,1

**Correct answer: C)**

## Question 26

**What will be printed on the screen? And what are the final values of the variables?**

```
int x = 6, y = 3;
x = x & y; // bitwise AND
y = y | 4; // bitwise OR
if ( (x ^ y) > 0 )
{ // bitwise XOR
    x += y;
} else {
    y -= x;
}
```

```
cout << x << ":" << y;
```

A) 0:3

B) **9:7**

C) 6:3

D) 4:5

**Correct answer: B)**

## Question 27

**What will be printed on the screen? And what are the final values of the variables?**

```
int a = 5, b = 2;  
a = a << 1; // shift left  
b = b >> 1; // shift right  
int c = (a & b) | (a ^ b);  
if ( c > 5 && (a > b) ) {  
    b += c;  
} else {  
    a -= c;  
}  
cout << a << "," << b << "," << c;
```

A) **10,12,11**

B) 4,2,5



C) 6,3,7

D) 8,4,2

**Correct answer: A)**

## Question 28

**What will be printed on the screen? And what is the final value of result?**

```
string s1 = "apple";  
string s2 = "apricot";  
int result;  
if (s1 == s2) {  
    result = 0;  
} else if (s1 > s2) {  
    result = 1;  
} else {  
    result = -1;  
}  
cout << result;
```

A) 0

B) -1

C) 1

D) 2

**Correct answer: B) -1**

(*"apple" أصغر lexicographically من "apricot" لأن*)

## Coding questions

### Question 29

Write a C++ program that asks the user to enter an integer number.

- If the number is **positive**, print:  
The number is positive.
- If the number is **negative**, print:  
The number is negative.
- If the number is **zero**, print:  
The number is zero.

### Question 30

Write a C++ program that asks the user to enter a **three-digit integer** (for example: 431).

The program should calculate and print the **sum of its digits**.

- You must use **if statements**, the **modulus operator (%)**, and **integer division (/)** in your solution.

مثال:

If the user enters 431 → the output should be:

The sum of digits = 8

## Question 31

Write a C++ program that asks the user to enter a positive integer.

The program should check and print whether the number is **prime** or **not prime**.

معلومة:

A **prime number** is a number **greater than 1** that has **no divisors other than 1 and itself**.

(Examples of prime numbers: 2, 3, 5, 7, 11...)

**Output examples:**

- If the user enters 7 → 7 is prime.
- If the user enters 8 → 8 is not prime.

## Question 32

Write a C++ program that asks the user to enter the amount of money they want to withdraw.

- If the amount is **greater than 5000**, apply a 10% discount (like a bank offer) and print the final amount after discount.
  - If the amount is **greater than 1000 but less than or equal 5000**, apply a 5% discount.
  - Otherwise, print the amount with no discount.
- 

## Question 33

Write a C++ program that asks the user to enter a grade from 0 to 100.

Then print the letter grade:

- A if grade  $\geq 90$
- B if grade  $\geq 80$
- C if grade  $\geq 70$
- D if grade  $\geq 60$

- F otherwise
- 

## Question 34

**Write a C++ program that asks the user to enter three integers.**

Then print the largest number among them.

(استخدم nested if أو if-else if)

---

## Question 35

**Write a C++ program that asks the user to enter the number of hours worked.**

- If hours  $\leq 40 \rightarrow \text{pay} = \text{hours} \times 5$
  - If hours  $> 40 \rightarrow \text{pay} = (40 \times 5) + (\text{extra hours} \times 10)$   
Then print the total pay.
- 

## Question 36

**Write a C++ program that has a secret number (for example, 7).**

Ask the user to guess a number:

- If the guess equals the secret  $\rightarrow$  print You guessed it!
- If the guess is less than the secret  $\rightarrow$  print Too low!
- If the guess is greater than the secret  $\rightarrow$  print Too high!

## Question 37

**Write a C++ program that asks the user to enter a day number (1 to 7).**

Then print the name of the day using a switch statement:

- 1  $\rightarrow$  Sunday
- 2  $\rightarrow$  Monday

- 3 → Tuesday
  - 4 → Wednesday
  - 5 → Thursday
  - 6 → Friday
  - 7 → Saturday
- Otherwise → print Invalid day number!

## Question 38

Write a C++ program that:

1. Declares an integer variable.
2. Declares a pointer that points to this integer.
3. Asks the user to enter a value for the integer through cin.
4. Prints the value of the integer **using the pointer** (dereferencing).

**Output example:**

If the user enters 50, the program should print:

The value using pointer = 50

## Solutions to coding questions

### Code1

```
#include <iostream>
using namespace std;

int main() {
    int num;
    cout << "Enter a three-digit number: ";
    cin >> num;
```

```

int digit1 = num % 10;    // آخر خانة
int digit2 = (num / 10) % 10; // الخانة الوسطى
int digit3 = num / 100;    // أول خانة

int sum = digit1 + digit2 + digit3;

cout << "The sum of digits = " << sum << endl;

return 0;
}

```

## Code2

```

#include <iostream>
using namespace std;

int main() {
    int num;

    cout << "Enter a positive integer: ";
    cin >> num;

    bool isPrime = true;

    if (num <= 1) {
        isPrime = false;
    }
}

```

```

    } else {
        for (int i = 2; i < num; i++) {
            if (num % i == 0) {
                isPrime = false;
                break;
            }
        }
    }

    if (isPrime) {
        cout << num << " is prime." << endl;
    } else {
        cout << num << " is not prime." << endl;
    }

    return 0;
}

```

## Code3

```

#include <iostream>

using namespace std;

int main() {
    double amount;

    cout << "Enter the amount: ";
}

```

```
cin >> amount;

if (amount > 5000) {
    amount = amount - (amount * 0.10);
} else if (amount > 1000) {
    amount = amount - (amount * 0.05);
}

cout << "Final amount after discount = " << amount << endl;
return 0;
}
```

## Code4

```
#include <iostream>
using namespace std;

int main() {
    int grade;
    cout << "Enter your grade: ";
    cin >> grade;

    if (grade >= 90) {
        cout << "A" << endl;
    }
}
```



```
} else if (grade >= 80) {  
    cout << "B" << endl;  
} else if (grade >= 70) {  
    cout << "C" << endl;  
} else if (grade >= 60) {  
    cout << "D" << endl;  
} else {  
    cout << "F" << endl;  
}  
  
return 0;  
}
```

## Code5

```
#include <iostream>  
using namespace std;  
  
int main() {  
    int a, b, c;  
    cout << "Enter three numbers: ";  
    cin >> a >> b >> c;  
  
    int largest = a;
```

```

    if (b > largest) {
        largest = b;
    }
    if (c > largest) {
        largest = c;
    }

    cout << "Largest number = " << largest << endl;
    return 0;
}

```

## Code6

```

#include <iostream>
using namespace std;

int main() {
    int hours;
    cout << "Enter number of hours worked: ";
    cin >> hours;

    int pay;
    if (hours <= 40) {
        pay = hours * 5;
    } else {
        pay = (40 * 5) + (hours - 40) * 10;
    }
}

```

```
}

cout << "Total pay = " << pay << endl;

return 0;

}
```

## Code7

```
#include <iostream>

using namespace std;
```

```
int main() {

    int secret = 7;

    int guess;

    cout << "Guess the number: ";

    cin >> guess;


    if (guess == secret) {

        cout << "You guessed it!" << endl;

    } else if (guess < secret) {

        cout << "Too low!" << endl;

    } else {

        cout << "Too high!" << endl;

    }


    return 0; }
```

## Code8

```
#include <iostream>

using namespace std;

int main() {
    int day;

    cout << "Enter day number (1-7): ";
    cin >> day;

    switch (day) {
        case 1:
            cout << "Sunday" << endl;
            break;
        case 2:
            cout << "Monday" << endl;
            break;
        case 3:
            cout << "Tuesday" << endl;
            break;
        case 4:
            cout << "Wednesday" << endl;
            break;
        case 5:
            cout << "Thursday" << endl;
            break;
        case 6:
```

```

        cout << "Friday" << endl;

        break;

    case 7:

        cout << "Saturday" << endl;

        break;

    default:

        cout << "Invalid day number!" << endl;

    }

    return 0;
}

```

## Code9

```

#include <iostream>

using namespace std;

int main() {

    int num;    // متغير عادي

    int* ptr;   // بوينتير لمتغير من نوع int

    ptr = &num; // خليت البوينتير يشير لمكان المتغير num

    cout << "Enter a number: ";

    cin >> num; // إدخال القيمة للمتغير

```

```
cout << "The value using pointer = " << *ptr << endl; // طباعة القيمة باستخدام البوينتر  
  
return 0;  
}
```

🌟 أحسنت!

إنك تكمل لآخر التست بنك يعني إنك جاد وطموح، وهذا أهم سر للتميز.

استمر، وخلّ طموحك أكبر من أي صعوبة تواجهك 🚀🌟 .

## Chapter 2&3 code Questions with Solutions

---

### Question 1

**Task:**

Read first name on one line, last name on the next line, then a bank account number starting with zero.

Print a welcome message with full name and account number as entered.

**Example Input:**

Omar

Khaled

0723456

**Example Output:**

Welcome Omar Khaled

Your account number is: 0723456

## Solution Code:

```
#include <iostream>
#include <string>
using namespace std;

int main() {
    string firstName, lastName, accountNumber;
    getline(cin, firstName);
    getline(cin, lastName);
    getline(cin, accountNumber);
    cout << "Welcome " << firstName << " " <<
lastName << "\n";
    cout << "Your account number is: " <<
accountNumber << "\n";
    return 0;
}
```



### Question 2:

Read initial balance (double), withdrawal amount, deposit amount, and interest percentage.

Print detailed report showing all operations and final balance.

#### **Example Input:**

1500.75

200.25

300

5

#### **Example Output:**

Original balance: 1500.75

After withdrawal of 200.25: 1300.50

After deposit of 300: 1600.50

After adding 5% interest: 1680.525

Final balance = 1680.525

## Solution Code:

```
#include <iostream>

using namespace std;

int main() {

    double balance, withdrawal, deposit,
    interestPercent;

    cin >> balance >> withdrawal >> deposit >>
    interestPercent;

    cout << "Original balance: " << balance << "\n";

    balance -= withdrawal;

    cout << "After withdrawal of " << withdrawal << ":
    " << balance << "\n";

    balance += deposit;

    cout << "After deposit of " << deposit << ": " <<
    balance << "\n";

    double interestAmount = balance *
    (interestPercent / 100);

    balance += interestAmount;
```

```
cout << "After adding " << interestPercent << "%  
interest: " << balance << "\n";  
  
cout << "Final balance = " << balance << "\n";  
  
return 0;  
}
```

---

### Question 3:

Read three integers A, B, C, then compute:

$(A + B * C) - (A \% C) + (B / 2)$ . Print result.

### Example Input:

```
5  
3  
4
```

### Example Output:

```
Result = 17
```

### Solution Code:

```
#include <iostream>  
  
using namespace std;
```

```
int main() {  
    int A, B, C;  
    cin >> A >> B >> C;  
    int result = (A + B * C) - (A % C) + (B / 2);  
    cout << "Result = " << result << "\n";  
    return 0;  
}
```

---

#### Question 4:

Read an integer, then print the original number, the number plus one, and the number minus one.

#### Example Input:

8

#### Example Output:

Original: 8

Plus one: 9

Minus one: 7

## Solution Code:

```
#include <iostream>

using namespace std;

int main() {
    int num;
    cin >> num;
    cout << "Original: " << num << "\n";
    cout << "Plus one: " << (num + 1) << "\n";
    cout << "Minus one: " << (num - 1) << "\n";
    return 0;
}
```