

```

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

int main() {
    //Question1
    int a;
    cout << "Enter a number to find its factors: ";
    cin >> a;
    cout << "The factors of a are: ";
    for (int i = 1; i <= a; i++) {
        if (a % i == 0) {
            cout << i << " ";
        }
    }
    cout << endl;

    //Question2 Output: x is 5 and y is 10

    //Question3
    int b;
    cout << "Enter a number to check if its greater than 10 and less than 20: ";
    cin >> b;
    if (b > 10 && b <= 20) {
        cout << "1";
    }
    else {
        cout << "0";
    }
    cout << endl;

    //Question4
    int N;
    cout << "Enter a number to find the greatest prime number less than it: ";
    cin >> N;
    for (int s = N; s >= 2; s--) {
        int sum1 = 0;
        for (int o = 2; o <= s / 2; o++) {
            if (s % o == 0) {
                sum1++;
                break;
            }
        }
        if (sum1 == 0) {
            cout << "The greatest prime number less than or equal to N is ";
            break;
        }
    }

    //Question5
    string str1, str2;
    cout << "Enter two strings: ";
    getline(cin, str1);
    getline(cin, str2);
    if (str1 == str2) {
        cout << "They are equal" << endl;
    }
}

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        reverse(str1.begin(), str1.end());
        reverse(str2.begin(), str2.end());
    }
    cout << "The reversed strings are: " << str1 << " " << str2;

//Question6
int dividend;
int divisor, quotient;
cout << "Enter the number to be divided ";
cin >> dividend;
cout << "Enter the number to be divided by ";
cin >> divisor;
while (dividend >= divisor) {
    dividend = dividend - divisor;
    quotient++;
}
cout << "The quotient is " << quotient << " " << "the remainder is " <<
dividend;

//Question7
string letter, uletter;
int len, count, count2;

cout << "Please Enter a Word to detect and remove duplicate characters :
";
cin >> letter;
uletter = letter;

for (count = 0; count < letter.length(); count++) {
    tolower(letter[count]);

    for (count2 = count + 1; count2 <= letter.length(); count2++) {
        if (letter[count] == letter[count2]) {
            letter[count] = ' ';
            letter[count2] = ' ';
        }
    }
}
uletter = "";
for (count = 0; count < letter.length(); count++) {
    if (isspace(letter[count])) {
        continue;
    }
    else {
        uletter += letter[count];
    }
}
cout << "New Word is: " << uletter << endl;

//Question8
int c[5] = { 1, 2 , 3, 4, 5 };
int d[8]; //We will add 3 more elements to the above defined array
for (int k = 0; k < 5; k++) {
    d[k] = c[k];
}
cout << "Enter 3 more elements to add to an array: ";
for (int u = 5; u <= 7; u++) {
    cin >> d[u];
}

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    }
    for (int l = 0; l < 8; l++) {
        cout << d[l];
    }

    //Question9
    int x = 9;
    int z[10] = { 1,2,3,4,5,6,7,8,9,10 };
    int size = 10;
    for (int a = 0; a < size - 2; ++a) {
        for (int b = a + 1; b < size - 1; ++b) {
            for (int c = b + 1; c < size; ++c) {
                if (z[a] + z[b] + z[c] == x) {
                    cout << "Triplet is: " << z[a] << " " << z[b] <<
" " << z[c] << " " << endl;
                }
            }
        }
    }

    //Question10: Bubble Sort Array
    int arr1[5] = {2,7,1,3,8 };
    cout << "The unsorted array is: ";
    for (int r = 0; r < 5; r++) {
        cout << arr1[r] << " ";
    }
    cout << endl;
    int temp;
    for (int i = 0; i < 5; i++) {
        for (int j = i+ 1; j < 5; j++) {
            if (arr1[j] < arr1[i]) {
                temp = arr1[i];
                arr1[i] = arr1[j];
                arr1[j] = temp;
            }
        }
    }
    cout << "Bubble sorted array is: ";
    for (int v = 0; v < 5; v++) {
        cout << arr1[v] << " ";
    }
}

```

Question1

Output

```
/tmp/Plt02gtjZf.o
```

```
Enter a number to find its factors: 18
```

```
The factors of a are: 1 2 3 6 9 18
```

Question3

Output

```
/tmp/Plt02gtjZf.o
```

```
Enter a number to check if its greater than 10 and less than 20: 9
```

```
0
```

Question4

Output

```
/tmp/Plt02gtjZf.o
```

```
Enter a number to find the greatest prime number less than it: 12
```

```
The greatest prime number less than or equal to N is 11
```

Question5

Output

```
/tmp/Plt02gtjZf.o
Enter two strings: waleed
waleed
They are equal
The reversed strings are: deela
```

Question6

Output

```
/tmp/Plt02gtjZf.o
Enter the number to be divided 21
Enter the number to be divided by 6
The quotient is 3 and the remainder is 3
```

Question7

Output

```
/tmp/Plt02gtjZf.o
Please Enter a Word to detect and remove duplicate characters : waleed
New Word is: wald
```

Question8

Output

```
/tmp/byh2sU192G.o
Enter 3 more elements to add to an array: 6
7
8
1 2 3 4 5 6 7 8 |
```

Question9

Output

```
/tmp/byh2sU192G.o
Triplet is: 1 2 6
Triplet is: 1 3 5
Triplet is: 2 3 4
|
```

Question10

Output

```
/tmp/byh2sU192G.o
The unsorted array is: 2 7 1 3 8
Bubble sorted array is: 1 2 3 7 8 |
```