

Task 1:

```
#include <iostream>
```

```
#include <string>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    string var;
```

```
    cout << "Enter variable name: ";
```

```
    cin >> var;
```

```
    string keywords[] = {"int", "float", "double", "char", "return", "if", "else"};
```

```
    if (isdigit(var.at(0))) {
```

```
        cout << "Invalid variable name";
```

```
        return 0;
```

```
    }
```

```
    for (int i = 0; i < 7; i++) {
```

```
        if (var == keywords[i]) {
```

```
            cout << "Invalid variable name";
```

```
            return 0;
```

```
        }
```

```
    }
```

```

for (int i = 0; i < var.length(); i++) {
    char c = var.at(i);
    if (!(isalnum(c) || c == '_' || c == '$')) {
        cout << "Invalid variable name";
        return 0;
    }
}

cout << "Valid variable name";
return 0;
}

```

Output:

```

Enter variable name: lvar
Invalid variable name
Process returned 0 (0x0)   execution time : 2.495 s
Press any key to continue.

```

Task 2:

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int a[]={10,20,30,40,50};
```

```
    int sum=0;
```

```

for(int i=0;i<5;i++){
    sum+=a[i];
}

cout<<"Average Value = "<<sum/5<<endl;

return 0;
}

```

Output:

```

Average Value = 30

Process returned 0 (0x0)   execution time : 0.419 s
Press any key to continue.

```

Task 3:

```

#include <iostream>

using namespace std;

int main()
{
    int a[]={7,-2,15,4,9};
    int min=a[0];

    for(int i=1;i<5;i++){
        if(a[i]<min){

```

```

        min=a[i];
    }
}

cout<<"Minimum = "<<min<<endl;

int max=a[0];

for(int i=1;i<5;i++){
    if(a[i]>max){
        max=a[i];
    }
}

cout<<"Maximum = "<<max<<endl;

return 0;
}

```

Output:

```

Minimum = -2
Maximum = 15

Process returned 0 (0x0)   execution time : 0.381 s
Press any key to continue.

```

Task 4:

```
#include <iostream>

#include <string>

using namespace std;

int main()
{
    string firstName;
    string lastName;

    cout<<"Enter First Name: ";
    cin>>firstName;

    cout<<"Enter Last Name: ";
    cin>>lastName;

    cout<<"Full Name: "<<firstName<<" "<<lastName<<endl;

    return 0;
}
```

Output:

```
Enter First Name: Shakila
Enter Last Name: Rahman
Full Name: Shakila Rahman

Process returned 0 (0x0)   execution time : 26.307 s
Press any key to continue.
```

Task 5:

```
#include <iostream>
```

```
#include <fstream>
```

```
using namespace std;
```

```
int main() {
```

```
    int n;
```

```
    cout << "Number of students: ";
```

```
    cin >> n;
```

```
    ofstream fout("students.txt");
```

```
    for (int i = 1; i <= n; i++) {
```

```
        string name;
```

```
        int marks;
```

```
        cout << "Student " << i << " name: ";
```

```
        cin >> name;
```

```
        cout << "Student " << i << " marks: ";
```

```
        cin >> marks;
```

```
        fout << name << " " << marks << endl;
```

```
    }
```

```
    fout.close();
```

```
    ifstream fin("students.txt");
```

```
string name;

int marks;

cout << "Data read from file: "<<endl;

while (fin >> name >> marks) {

    cout << name << " " << marks << endl;

}

fin.close();

return 0;

}
```

Output:

```
Number of students: 2
Student 1 name: Alice
Student 1 marks: 85
Student 2 name: Bob
Student 2 marks: 92
Data read from file:
Alice 85
Bob 92

Process returned 0 (0x0)   execution time : 20.887 s
Press any key to continue.
```