

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.
```