

NAME:NOORFATIMA

PF LAB

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The screenshot shows a C++ IDE with the file 'lab 3 task 1.cpp' open. The code is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     string name;
6     int cnic;
7     int semester;
8     char grade;
9     cout<<"ENTER YOUR NAME";
10    cin>>name;
11    cout<<"ENTER YOUR CNIC";
12    cin>>cnic;
13    cout<<"ENTER YOUR SEMESTER";
14    cin>>semester;
15    cout<<"ENTER YOUR GRADE";
16    cin>>grade;
17
18    cout<<"YOUR NAME IS :"<<name<<endl;
19    cout<<"YOUR CNIC IS:"<<cnic<<endl;
20    cout<<"YOUR SEMESTER IS:"<<semester<<endl;
21    cout<<"YOUR GRADE IS:"<<grade<<endl;
22    return 0;
23 }
```

The console output shows the program's execution with the following input and output:

```
ENTER YOUR NAMEnoorfatima
ENTER YOUR CNIC66778899
ENTER YOUR SEMESTER1
ENTER YOUR GRADEa
YOUR NAME IS :noorfatima
YOUR CNIC IS:66778899
YOUR SEMESTER IS:1
YOUR GRADE IS:a
-----
Process exited after 19.88 seconds with return value 0
Press any key to continue . . .
```

The compiler log at the bottom shows the output file 'C:\Users\Sardar Waqar\Desktop\lab 3 task 1.exe' with a size of 2.99529552459717 MiB and a compilation time of 2.14s.

## TASK 2

The screenshot shows a C++ IDE with the file 'noor task 2.cpp' open. The code is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     float pi=3.14;
6     double radius;
7     cout<<"ENTER THE VALUE OF RADIUS"<<endl;
8     cin>>radius;
9     float area=pi*radius*radius;
10    float circumference=2*pi*radius;
11    cout<<"AREA="<<area<<endl;
12    cout<<"CIRCUMFERENCE="<<circumference<<endl;
13    return 0;
14 }
```

The console output shows the program's execution with the following input and output:

```
ENTER THE VALUE OF RADIUS
44
AREA=6079.04
CIRCUMFERENCE=276.32
-----
Process exited after 4.398 seconds with return value 0
Press any key to continue . . .
```

The compiler log at the bottom shows the output file 'C:\Users\Sardar Waqar\Desktop\noor task 2.exe' with a size of 2.98922252655029 MiB and a compilation time of 2.39s.

### TASK 3

The screenshot shows an IDE with the following components:

- Project Explorer:** Shows 'noor task 2.cpp' and 'taxk noor 3.cpp'.
- Source Editor:** Displays the code for 'taxk noor 3.cpp':

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     float meal;
6     cout<<"ENTER THE PRICE OF MEAL"<<endl;
7     cin>>meal;
8     float tax=meal*9.25/100;
9     float mtax=meal+tax;
10    float tip=mtax*20/100;
11    float total=mtax+tip;
12
13    cout<<"your meal price is:"<<meal<<endl;
14    cout<<"your meal tax is:"<<tax<<endl;
15    cout<<"your meal tip is:"<<tip<<endl;
16    cout<<"total amount is:"<<total;
17    return 0;
18 }
```
- Compiler Output:** Shows the compilation details for 'taxk noor 3.cpp':
  - Output Filename: C:\Users\Sardar Waqar\Desktop\taxk noor 3.exe
  - Output Size: 2.98922252655029 MiB
  - Compilation Time: 1.56s
- Console:** Displays the program's output:

```
ENTER THE PRICE OF MEAL
1800
your meal price is:1800
your meal tax is:166.5
your meal tip is:393.3
total amount is:2359.8
-----
Process exited after 13.3 seconds with return value 0
Press any key to continue . . .
```

### TASK 4

The screenshot shows an IDE with the following components:

- Project Explorer:** Shows 'noor task 2.cpp', 'taxk noor 3.cpp', and 'nooor task 4.cpp'.
- Source Editor:** Displays the code for 'nooor task 4.cpp':

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int age;
6     cout<<"WHAT IS YOUR AGE?"<<endl;
7     cin>>age;
8     int past=age-1;
9     int future=age+1;
10    cout<<"You are " <<age<<" years old."<<endl;
11    cout<<"one year ago you were "<<past<<" years old."<<endl;
12    cout<<"after one year you will be "<<future<<" years old.";
13    return 0;
14 }
```
- Compiler Output:** Shows the compilation details for 'nooor task 4.cpp':
  - Output Filename: C:\Users\Sardar Waqar\Desktop\noor task 4.exe
  - Output Size: 2.98922252655029 MiB
  - Compilation Time: 1.45s
- Console:** Displays the program's output:

```
WHAT IS YOUR AGE?
18
You are 18 years old.
one year ago you were 17 years old.
after one year you will be 19 years old.
-----
Process exited after 4.829 seconds with return value 0
Press any key to continue . . .
```