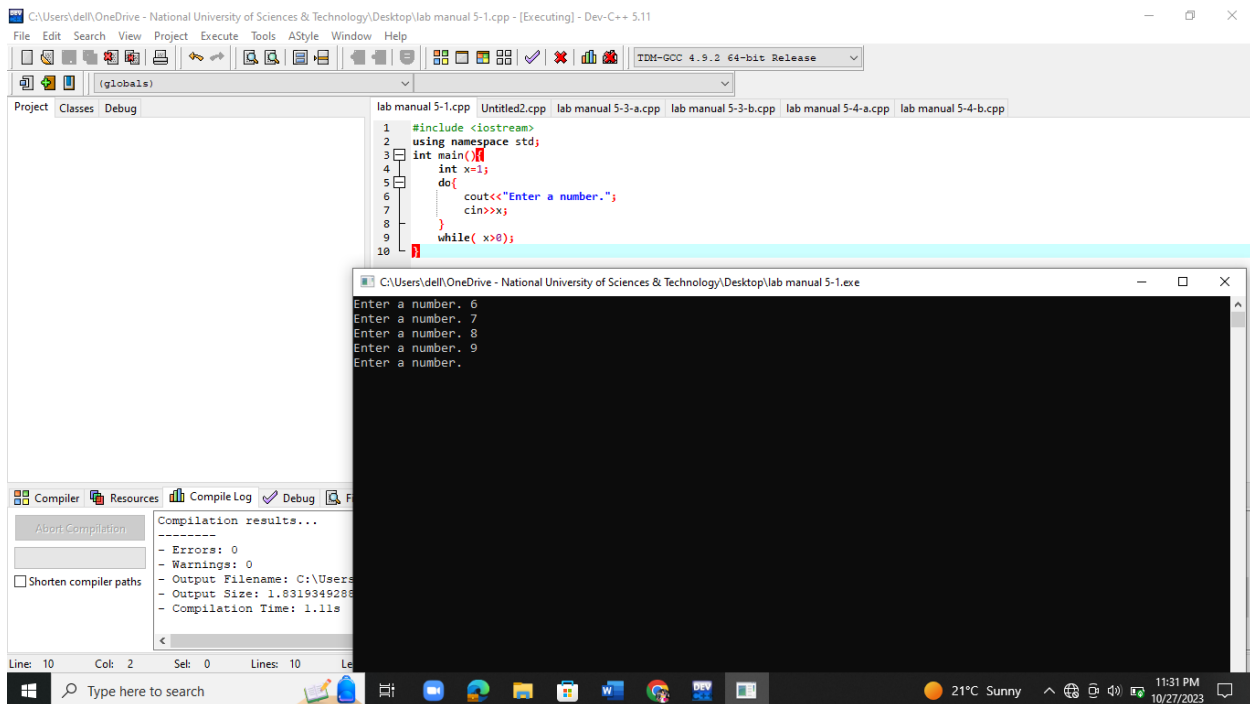


## Lab Manual:

### Lab task:

#### Question 1 :

1. `#include <iostream>`
2. `using namespace std;`
3. `int main(){`
4.     `int x=1;`
5.     `do{`
6.         `cout<<"Enter a number.";`
7.         `cin>>x;`
8.     `}`
9.     `while( x>0);`
10. `}`

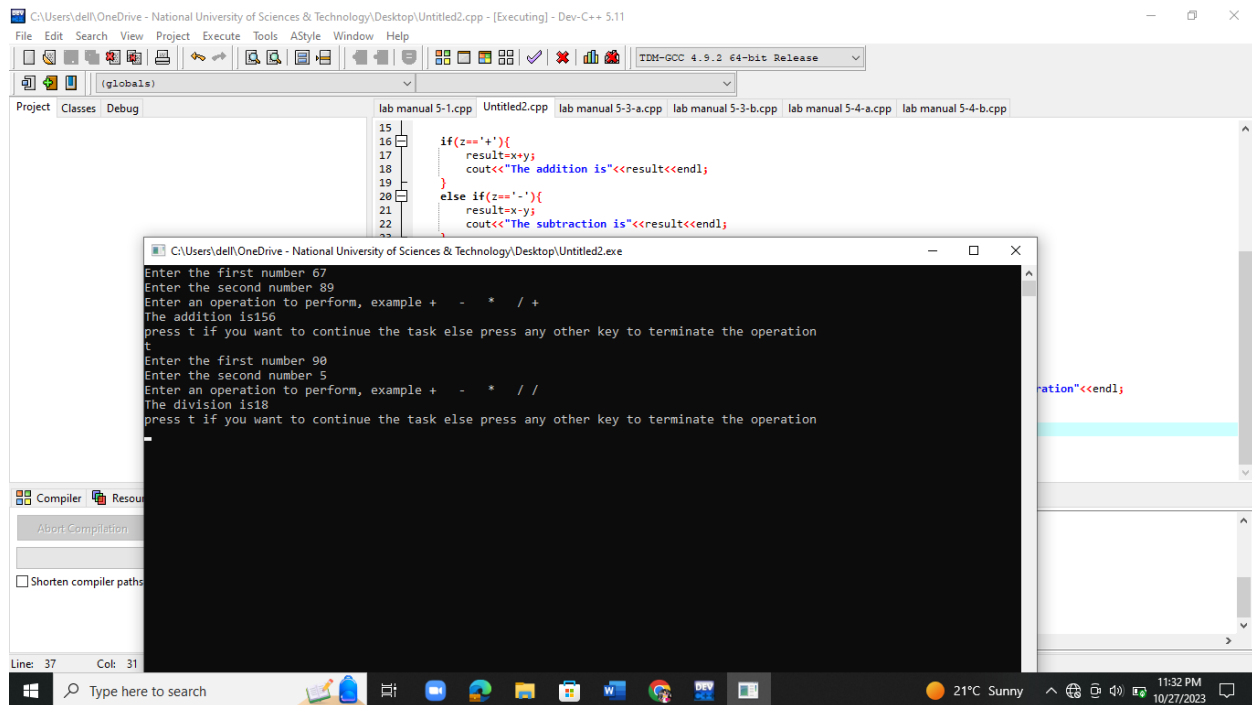


#### Question 2:

1. `#include <iostream>`
2. `using namespace std;`
3. `int main(){`

```
4.     double x,y,result;
5.     char operation, action,z;
6.
7.     do{
8.         cout<<"Enter the first number";
9.         cin>>x;
10.        cout<<"Enter the second number";
11.        cin>>y;
12.        cout<<"Enter an operation to perform, example + - * /";
13.        cin >>z;
14.
15.
16.        if(z=='+'){
17.            result=x+y;
18.            cout<<"The addition is"<<result<<endl;
19.        }
20.        else if(z=='-'){
21.            result=x-y;
22.            cout<<"The subtraction is"<<result<<endl;
23.        }
24.        else if(z=='*'){
25.            result=x*y;
26.            cout<<"The multiplication is"<<result<<endl;
27.        }
28.        else if(z=='/'){
29.            result=x/y;
30.            cout<<"The division is"<<result<<endl;
31.        }
32.
33.
34.        cout<<"press t if you want to continue the task else press any other
key to terminate the operation"<<endl;
35.        cin >> action;
36.
37.    }    while(action == 't' );
```

38.  
39.  
40.}



Question 3 part a:

1. #include <iostream>
2. using namespace std;
3. int main(){
4. int i=2, sum=0;
5. do{
6. sum=sum+i;
7. i=i+2;
- 8.
9. } while(i<=100);
10. cout<<"The sum is"<<sum;
- 11.}

The screenshot shows the Dev-C++ IDE with a C++ program open. The program calculates the sum of squares from 1 to 100. The output window shows the result: 'The sum is 2550'. The program's path is 'C:\Users\dell\OneDrive - National University of Sciences & Technology\Desktop\lab manual 5-3-a.exe'. The status bar at the bottom indicates the system is at 21°C, Sunny, on 10/27/2023 at 11:33 PM.

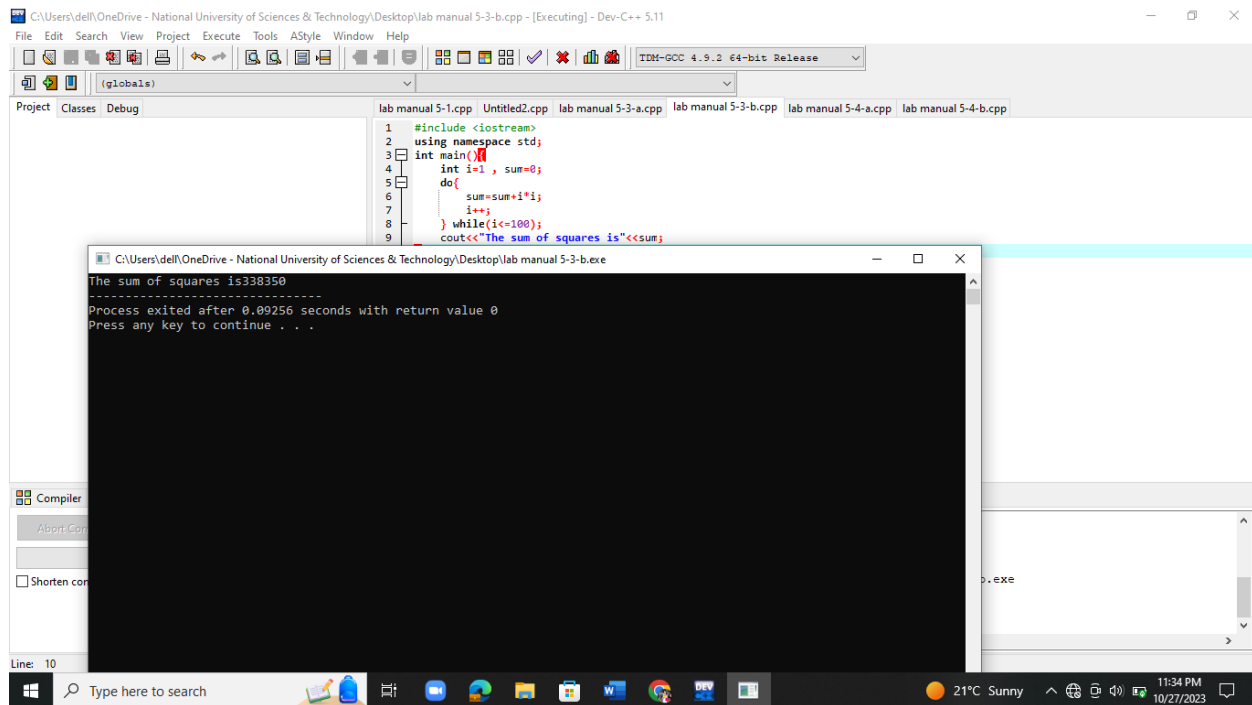
```
1 #include <iostream>
2 using namespace std;
3 int main()
4 {
5     int i=1, sum=0;
6     do{
7         sum=sum+i*i;
8         i++;
9     } while(i<=100);
10    cout<<"The sum is"<<sum;
```

The sum is 2550

Process exited after 0.08728 seconds with return value 0  
Press any key to continue . . .

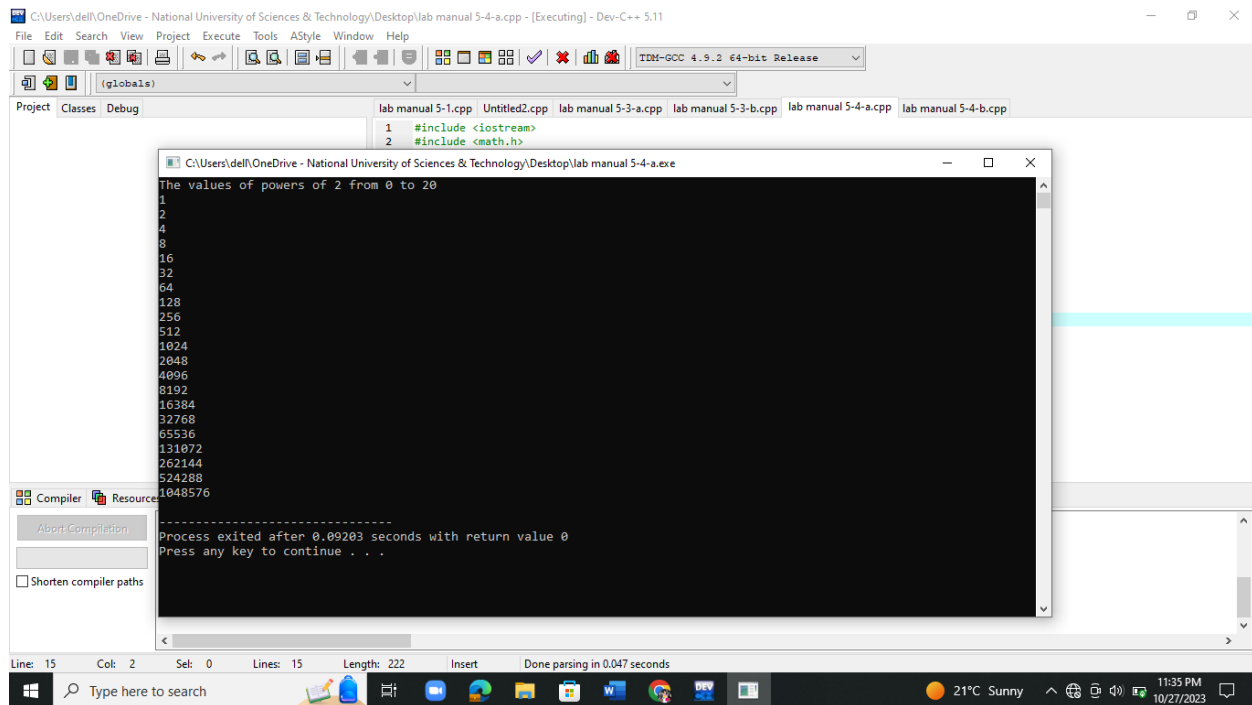
### Question 3 part b;

1. #include <iostream>
2. using namespace std;
3. int main(){
4. int i=1 , sum=0;
5. do{
6. sum=sum+i\*i;
7. i++;
8. } while(i<=100);
9. cout<<"The sum of squares is"<<sum;
10. }



## Question 4 part a:

1. #include <iostream>
2. #include <math.h>
3. using namespace std;
4. int main(){
5. int x=0,a;
6. cout<<"The values of powers of 2 from 0 to 20 "<<endl;
7. do{
8. a=pow(2,x);
9. x++;
10. cout<<a<<endl;
11. }
- 12.
13. while( x<=20);
- 14.
- 15.}



## Question 4 part b:

1. `#include <iostream>`
2. `using namespace std;`
3. `int main(){`
4.     `int a,b,sum;`
5.     `cout<<"Enter the first number";`
6.     `cin>>a;`
7.     `cout<<"Enter the second number";`
8.     `cin>>b;`
9.     `do{`
10.         `if(a%2==1){`
11.             `sum=sum+a;`
12.         `}`
13.         `a++;`
14.     `}while(a<=b);`
15.     `cout<<"The sum of odd numbers is"<<sum;`
16.     `17.}`

