NUST

NATIONAL UNIVERSITY
OF SCIENCES & TECHNOLOGY

LAB MANUAL 05

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SECTION :	A
COURSE:	FOP
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TASK 01:

TASK 01:make a calculator using do while loop

```
#include <iostream>

#include <cmath>

using namespace std;
```

```
int main(){
char operation;
double num1,num2,stp;
do{
cout<<"enter num1 =";
cin>>num1;
cout<<"enter num2 =";
cin>>num2;
cout<<"enter required operation +,-,/,*"<<endl;
cin>>operation;
switch (operation){
case '1':
cout<<"sum of num1 and num2 is="<<num1+num2<<endl;
break;
case '2':
cout<<"difference of num1 and num2 is="<<num1-num2<<endl;
break;
case '3':
cout<<"division of num1 num2 is ="<<num1/num2<<endl;
break;
case '4':
cout<<"multiplication of num1 and num2 is ="<<num1*num2<<endl;
break;
}cout<<"press 'r' to stop the calculator";
 cin>>stp;
}while(operation == 'o');
return 0;
}
```

TASK 2:conver into while loop

```
#include <iostream>
using namespace std;
int main(){
int x=1;
do{
  cout<<"enter a number:";
cin>>x;
}
while (x>0);
return 0;
}
```

TASK 03:sum of even num upto 100

```
#include <iostream>
using namespace std;
int main(){
int n=2,sum=0;
while (n<=100){
if (n%2==0)
sum+=n;
n++;
}
cout<<"the sum of even numbers between 2 nd 100 is ="<<sum<<endl;
return 0;
}
```

TASK 04:powera of 2 from 0 to 20

```
#include <iostream>
#include <cmath>
using namespace std;
```

```
int main(){
int n=1,sum=0;
while (n<=100){
pow(n,2);
sum+=n;
n++;

}
cout<<"the sum of squares upto 100 is ="<<"  "<<sum<<endl;
return 0;
}
```

TASK 05: SUM OF ODD NUMBERS BETWEEN ‘a’ and ‘b’

```
#include <iostream>
#include <cmath>
using namespace std;

int main() {
   int a, b;

   /*
  cout << "Enter the value of 'a': ";
  cin >> a;
  cout << "Enter the value of 'b': ";
  cin >> b;

   int sum = 0;
   int ndNumber = a;
   while (ndNumber <= b) {
```

```
        // Ensure that 'a' is odd, if not, make it odd
    if (ndNumber % 2 == 0)
        ndNumber++;
        sum += ndNumber;
        ndNumber += 2;  // Move to the next odd number
    }

    cout << "The sum of all odd numbers between " << a << " and " << b << " is: " << sum <<endl;

    return 0;
}*/
```