



NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY

LAB MANUAL # 5

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- **SECTION: B**
- **CMS ID: 463157**

Task no:1

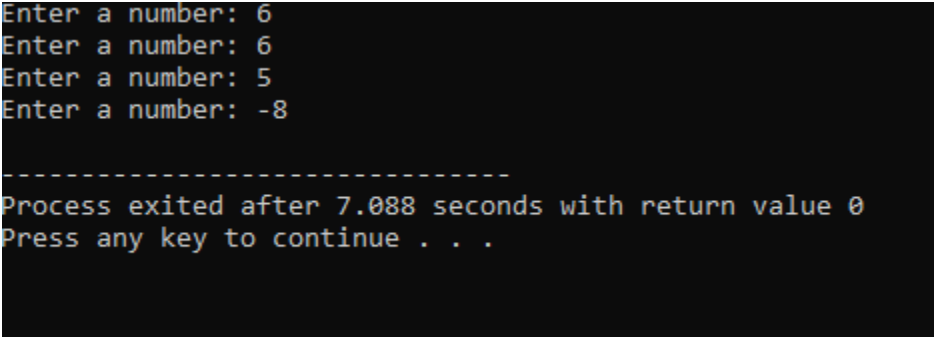
```
#include <iostream>
using namespace std;
int main(){
int x=1;
do{
cout<<"Enter a number: ";
cin>>x;
```

```
}while(x>0);
```

```
return 0;
```

```
}
```

RESULT:



```
Enter a number: 6
Enter a number: 6
Enter a number: 5
Enter a number: -8

-----
Process exited after 7.088 seconds with return value 0
Press any key to continue . . .
```

Task no:2

```
#include <iostream>
```

```
using namespace std;
```

```
int main(){
```

```
char choice;
```

```
do{
```

```
float num1,num2,result;
```

```
char operation;
```

```
cout<<"Please enter a number: ";
```

```
cin>>num1;
```

```
cout<<"Please enter an operation: ";
```

```
cin>>operation;
```

```
cout<<"please enter another number: ";
```

```
cin>>num2;
```

```
switch(operation){
```

```
case '+':
```

```
    result=num1+num2;break;
case '-':
    result=num1-num2;break;
case '/':
    result=num1/num2;break;
case '*':
    result=num1*num2;break;

default:
    cout<<"Invalid operator."<<endl;
    return 0;
}

cout<<"result: "<<result<<endl;
//if you want to calculate again
cout<<"calculate again? (Y or N)";
cin>>choice;

}while (choice=='y' || choice=='Y');
cout<<"calculator terminated. Good bye!";
return 0;
}
```

RESULT:

```
Please enter a number: 2
Please enter an operation: -
please enter another number: 5
result: -3
calculate again? (Y or N)y
Please enter a number: 9
Please enter an operation: /
please enter another number: 3
result: 3
calculate again? (Y or N)N
calculator terminated. Good bye!
-----
Process exited after 45.38 seconds with return value 0
Press any key to continue . . . _
```

Task no:3

```
#include <iostream>

using namespace std;

int main(){

int even_sum=0;

int even_num=2;

while (even_num<=100){

;

even_sum+=even_num;

even_num+=2;


}

cout<<"Sum of even number between 2 and 100: "<<even_sum<<endl;

int square_sum=0;

int num=1;

while(num<=100){

square_sum=num*num;

num++;
```

```

}

cout<<"Sum of sqaures between 1 and 100: "<<square_sum;

return 0;

}

```

RESULT:

```

Sum of even number between 2 and 100: 2550
Sum of sqaures between 1 and 100: 10000
-----
Process exited after 0.06957 seconds with return value 0
Press any key to continue . . .

```

Task no:4 (part 1)

```

#include <iostream>

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 current=a;

do{

if(current%2!=0){

sum=sum+current;

}

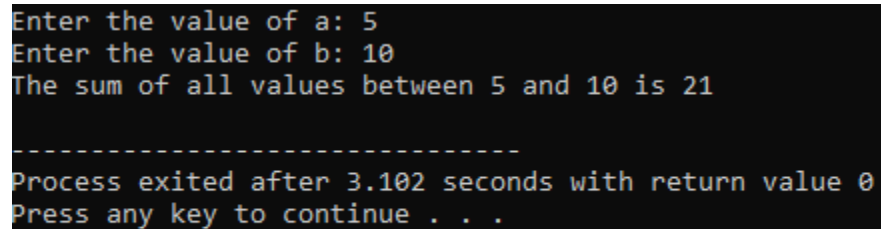
current++;

}while(current<=b);

```

```
cout<<"The sum of all values between "<<a<<" and "<<b<<" is "<<sum<<endl;
return 0;
}
```

RESULT:



```
Enter the value of a: 5
Enter the value of b: 10
The sum of all values between 5 and 10 is 21

-----
Process exited after 3.102 seconds with return value 0
Press any key to continue . . .
```

Task no :4(part 2)

```
#include <iostream>
#include <math.h>
using namespace std;
int main(){
double power=0;
while (power<=20){
double result=pow(2,power);
cout<<"2^"<<power<<"="<<result<<endl;
power++;
}
return 0;
}
```

RESULT:

```
2^0=1
2^1=2
2^2=4
2^3=8
2^4=16
2^5=32
2^6=64
2^7=128
2^8=256
2^9=512
2^10=1024
2^11=2048
2^12=4096
2^13=8192
2^14=16384
2^15=32768
2^16=65536
2^17=131072
2^18=262144
2^19=524288
2^20=1.04858e+006
```

```
-----
Process exited after 0.08173 seconds with return value 0
Press any key to continue . . .
```