

Lab manual # 5

task 1:

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

Output
<pre>/tmp/b3zLY9DL9D.o enter a number 1 enter a number 2 enter a number 3 enter a number 4 enter a number 5 </pre>

task 2:

```
#include <iostream>
#include<math.h>
using namespace std;
int main() {
    int x, y , ans=0 ,i;
    char operation;
    do {
        cout<<"enter first number"<<endl;
        cin>>x;
        cout<<"enter second number"<<endl;
        cin>>y;
        cout<<"enter operation(+for addition,- for subttaction, * for multiplication, /
for division , % for modulus , ^ for power"<<endl;
        cin>>operation;
        switch (operation) {
            case '+':
                ans=x+y;
                break;
            case '-':
                ans=x-y;
                break;
            case '*':
                ans=x*y;
                break;
            case '/':
                if (y==0) {
                    cout<<"invalid denominator"<<endl;
                }
                ans=x/y;
                break;
            case '%':
                if (y==0) {
                    cout<<"invalid second number"<<endl;
                }
                ans=x%y;
                break;
            case '^':
                ans=pow(x,y);
```

```

        default:
        cout<<"invalid operation try again"<<endl;
    }

    cout<<ans <<endl;

    cout<<"press 1 to continue and 0 for termination"<<endl;
    cin>>i;
}
while (i==1);
return 0;
}

```

```

enter first number
7
enter second number
8
enter operation(+for addition,- for subtraction, * for multiplication, / for division, % for modulus,
^ for power
+
15
press 1 to continue and 0 for termination
1
enter first number
4
enter second number
8
enter operation(+for addition,- for subtraction, * for multiplication, / for division, % for modulus,
^ for power
\
invalid operation try again
15
press 1 to continue and 0 for termination
0

...Program finished with exit code 0
Press ENTER to exit console.

```

task 3:

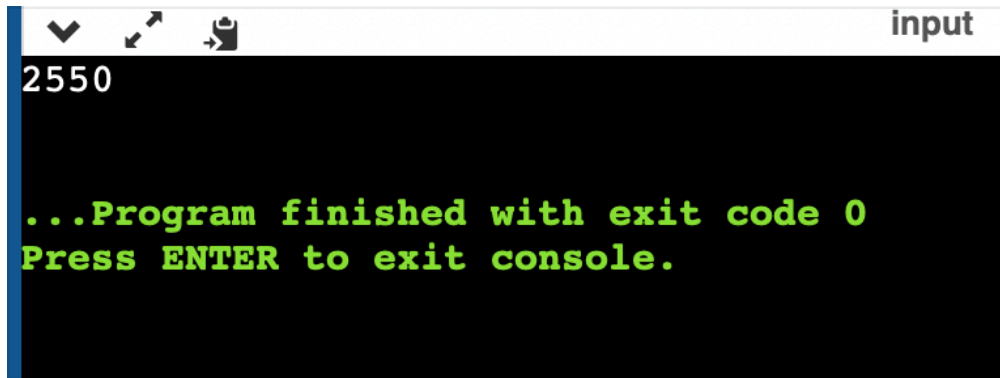
a)

```

#include <iostream>
#include<math.h>
using namespace std;
int main() {
int x=2,sum=0;
while (x<=100) {
    if (x%2==0) {
        sum =sum+x;
    }
    x++;
}
cout<<sum<<endl;

```

```
    return 0;
}
```



```
input
2550

...Program finished with exit code 0
Press ENTER to exit console.
```

b)

```
#include <iostream>
#include<math.h>
using namespace std;
int main() {
    int x=1,sum=0;
    while (x<=100) {
        sum=sum + x*x;
        x++;
    }
    cout<<sum<<endl;
    return 0;
}
```



```
input
338350

...Program finished with exit code 0
Press ENTER to exit console.
```

task 4:

a)

```

#include <iostream>
#include<math.h>
using namespace std;
int main() {
int x=0;
while (x<=20) {

    cout<<pow(2,x)<<endl;
    x++;
}

return 0;
}

```



```

input
1024
2048
4096
8192
16384
32768
65536
131072
262144
524288
1.04858e+06

...Program finished with exit code 0
Press ENTER to exit console.

```

b)

```

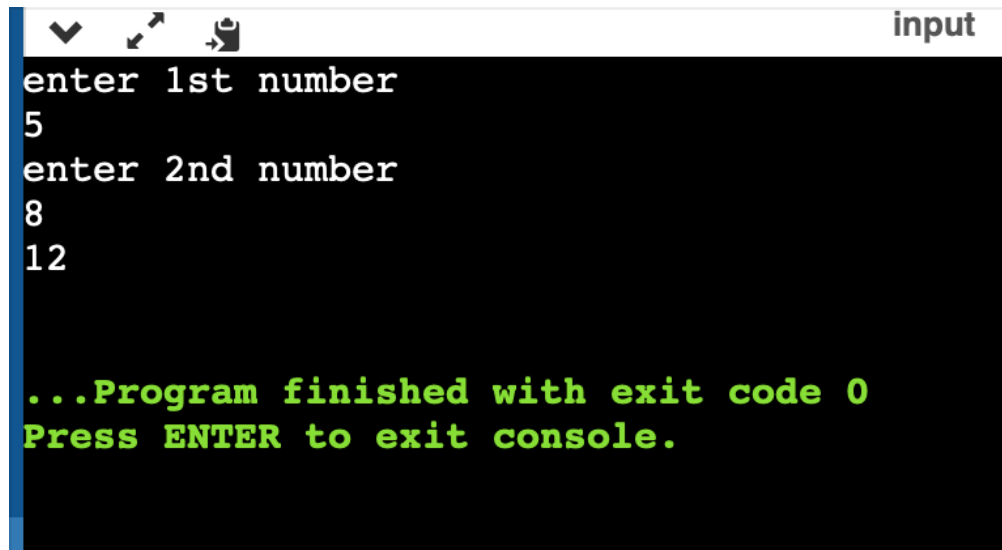
#include <iostream>
#include<math.h>
using namespace std;
int main() {
int a,b , sum=0 ;
cout<<"enter 1st number"<<endl;
cin>>a;
cout<<"enter 2nd number"<<endl;
cin>>b;

while (a<=b ) {

```

```
    if (a%2==1 ) {  
        sum=sum+a;  
    }  
    a++;  
}  
cout<<sum<<endl;
```

```
    return 0;  
}
```



```
input  
enter 1st number  
5  
enter 2nd number  
8  
12  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```