**Lab 02 DSA**

**Task 1:**

#include <iostream>

using namespace std;

int main(void)

{

int \*salary= new int[20];

int i;

for (i=0;i<20;++i)

      {

cout<<"Enter Salary: ";

cin>>\*(salary+i);

     }

for (i=0;i<20;++i)

\*(salary+i)=\*(salary+i)+\*(salary+i)/(i+1);

delete []salary;

return 0;

}

**Task 2:**

#include <iostream>

using namespace std;

void analyze\_pointer(int \*ptr)

{

    cout<<"Memory Address of the pointer is: "<<ptr<<endl;

    cout<<"The Value pointer by the pointer is: "<<\*ptr<<endl;

}

int main(void)

{

    int\* ptr= new int(10);

    int i = 20;

    analyze\_pointer(&i);

    cout<< endl;

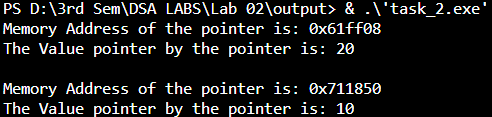
    analyze\_pointer(ptr);

    delete ptr;

return 0;

}

**Output:**

****

**Task 3:**

#include <iostream>

using namespace std;

struct Area

{

    private:

    string unit;

    float area\_value;

    public:

    Area(string uni, float value)

    {

        unit = uni;

        area\_value= value;

    }

    float half\_area()

    {

        return area\_value/2;

    }

    float quarter\_area()

    {

        return area\_value/4;

    }

    void display()

    {

        cout<<"The Unit is: "<<unit<<endl;

        cout<<"The value is: "<<area\_value;

    }

};

int main()

{

    Area\* shape= new Area("cm^2",100);

    cout<<"The Half area is: "<<(\*shape).half\_area()<<endl;

    cout<<"The Quarter Area is: "<<(\*shape).quarter\_area()<<endl;

    (\*shape).display();

delete shape;

}

**Output:**

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