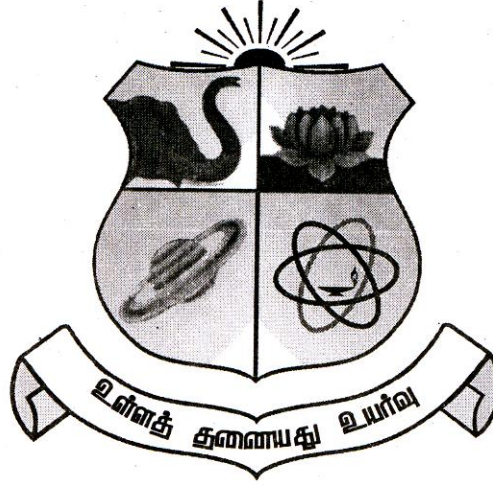


**ARIGNAR ANNA GOVERNMENT ARTS
AND SCIENCE COLLEGE**

KARAIKAL - 609605



VISUAL PROGRAMMING & DBMS LAB- Record

October - 2019

III-Semester

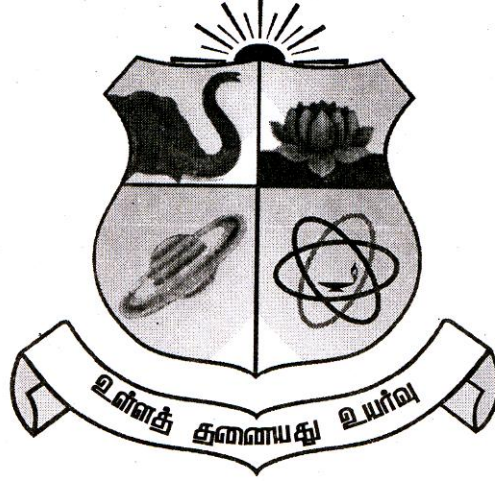
Name : _____

Reg. No. : _____

DEPARTMENT OF COMPUTER SCIENCE

AAGASC - KARAIKAL

**ARIGNAR ANNA GOVERNMENT ARTS AND
SCIENCE COLLEGE
KARAIKAL – 609605.**



DEPARTMENT OF COMPUTER SCIENCE

Certified that this is the bonafide record of practical work
done by Mr. / Miss
Reg. No. of Second Year B.Sc Computer Science
during the III-Semester in the academic year 2019-2020.

STAFF IN CHARGE

HEAD OF THE DEPARTMENT

Submitted for the University Examination held on

EXTERNAL EXAMINER

INTERNAL EXAMINER

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Exp. No. : 1

SIMPLE INTEREST

Aim : Write a c# program to calculate simple interest using console application

Algorithm:

Step 1: Start

Step 2: Declare p,n,r,SI as decimal

Step 3: Read p

Step 4: Read n

Step 5: Read r

Step 6: $SI = p * n * r / 100$

Step 7: Print SI

Step 8: Stop

Procedure :

Create Console Application in C#

Implement the above algorithm using C# Code

Code

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            decimal p, n, r, SI;
            Console.WriteLine("Enter Principal amount:\n");
            p = Convert.ToDecimal(Console.ReadLine());
            Console.WriteLine("Enter number of years:\n");
            n = Convert.ToDecimal(Console.ReadLine());
            Console.WriteLine("Rate of Interest:\n");
            r = Convert.ToDecimal(Console.ReadLine());
            SI = p * n * r / 100;
            Console.WriteLine("Simple Interest:" + SI);
            Console.ReadKey();
        }
    }
}
```

Output

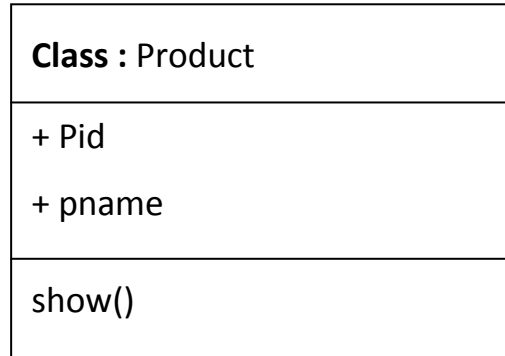
```
Enter Principal amount:
5000
Enter number of years:
2
Rate of Interest:
0.5
Simple Interest:50.0
```

Exp. No. : 2

IMPLEMENT CLASSES AND OBJECT

Aim : Design class diagram and write c# program for simple class object

Class Diagram:



Procedure :

Create Console Application in C#

Implement the above object using C# Code

CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace ConsoleApplication2
{
    class Product
    {
        public int pid;
        public string pname;
        public Product()
        {
            pid = 40;
            pname = "Lux";
        }
        public void show()
        {
            Console.WriteLine(pid);
            Console.WriteLine(pname);
        }
    }

    static void Main(string[] args)
    {
        Product p = new Product();
        p.show();
        p.pid = 34;
        p.pname = "Hamman";
        p.show();
        Console.ReadKey();
    }
}
```

Output

```
40
Lux
34
Hamman
```

Exp. No. : 3

POLYMORPHISM

Aim : Design class diagram and write c# program to implement polymorphism

Class Diagram:

Class : Product
showLine() showLine(string st) showLine(string st, int n)

Procedure :

Create Console Application in C#

Implement the above object using C# Code

CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace ConsoleApplication1
{
    class Examplepoly
    {
        public static void showline()
        {
            Console.WriteLine("-----");
        }
        public static void showline(string st)
        {
            for (int i = 1; i <= 50; i++)
                Console.WriteLine(st);
        }
        public static void showline(string st, int n)
        {
            for (int i = 1; i <= n; i++)
                Console.WriteLine(st);
        }
        static void Main(string[] args)
        {
            Examplepoly.showline();
            Examplepoly.showline("*");
            Examplepoly.showline("+", 20);
            Console.ReadKey();
        }
    }
}
```

Output

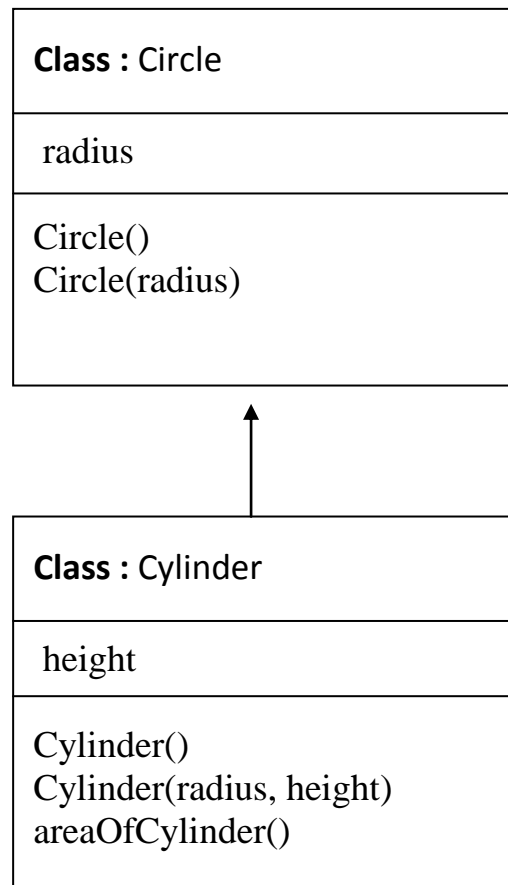
```
-----
*****
+++++
```

Exp. No. : 4

INHERITANCE

Aim : Design class diagram and write c# program to implement inheritance

Class Diagram:



Procedure :

Create Console Application in C#

Implement the above objects using C# Code

CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace ConsoleApplication4
{
    class Program
    {
        class circle
        {
            public double radius;
            public circle() { }
            public circle(double radius)
            {
                this.radius = radius;
            }
        }
        class cylinder : circle
        {
            double height;
            public cylinder()
            {
            }
            public cylinder(double radius, double height)
            {
                this.radius = radius;
                this.height = height;
            }
            public void areaofcylinder()
            {
                double area;
                area = Math.PI * radius * radius * height;
                Console.WriteLine("Area of Cylinder:" + area);
            }
        }
        static void Main(string[] args)
        {
            cylinder piller = new cylinder(5,10);
            piller.areaofcylinder();
            Console.ReadKey();
        }
    }
}
```

Output

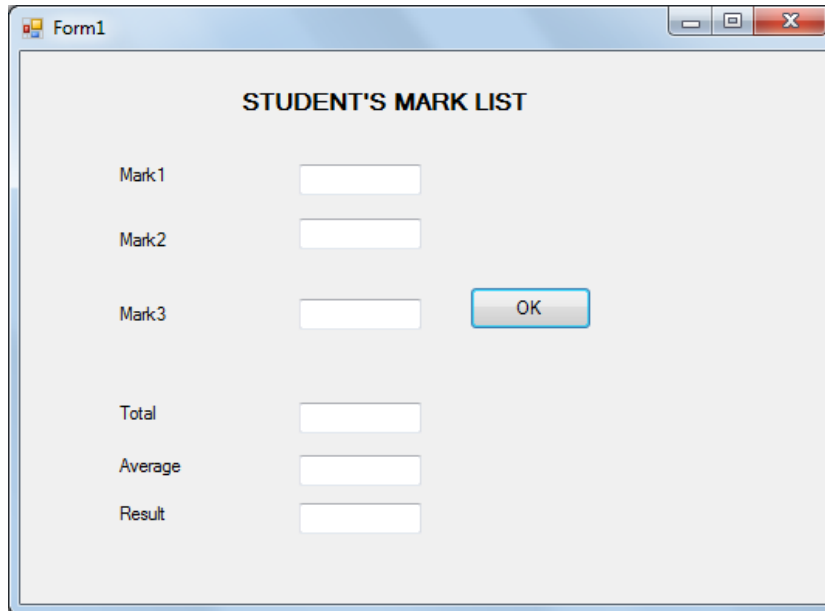
Area of Cylinder : 785.398163397448

Exp. No. : 5

STUDENT'S MARK LIST

Aim : Design a GUI for students mark list using c# windows application

Form Design



The screenshot shows a Windows application window titled "Form1" with the title "STUDENT'S MARK LIST". The window contains the following elements:

- Mark1:
- Mark2:
- Mark3:
- Total:
- Average:
- Result:

CODE:

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace WindowsFormsApplication16
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void button1_Click(object sender, EventArgs e)
        {
            int m1, m2, m3, tot;
            double avg;
            m1 = Convert.ToInt32(textBox1.Text);
            m2 = Convert.ToInt32(textBox2.Text);
            m3 = Convert.ToInt32(textBox3.Text);
            tot = m1 + m2 + m3;
            avg = tot / 3;
            textBox4.Text = Convert.ToString(tot);
            textBox5.Text = Convert.ToString(avg);
            if (m1 >= 40 && m2 >= 40 && m3 >= 40)
                textBox6.Text = "PASS";
            else
                textBox6.Text = "FAIL";
        }
    }
}
```

OUTPUT:

The image shows a screenshot of a Windows application window titled "Form1". The window contains a form titled "STUDENT'S MARK LIST". The form has several input fields and a button. The data entered in the fields is as follows:

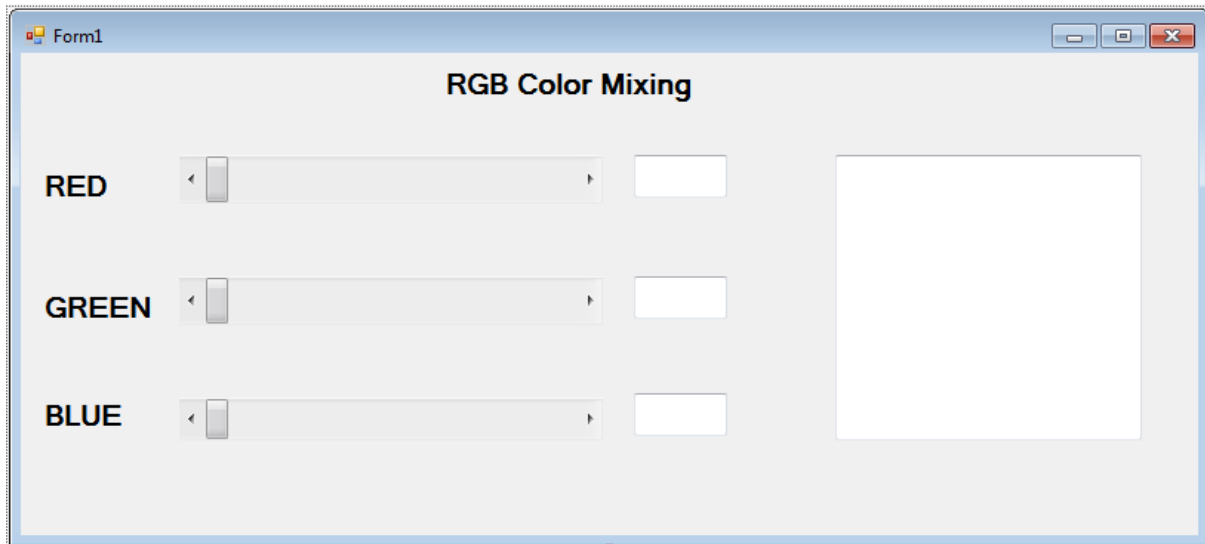
Field	Value
Mark1	95
Mark2	75
Mark3	85
Total	255
Average	85
Result	Pass

An "OK" button is located to the right of the Mark3 input field.

Exp. No. : 6

RGB COLOR MIX

Aim : Design a GUI to implement RGB Color Mix using c# windows application



Code

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;
namespace WindowsFormsApplication17
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }
        private void hScrollBar1_Scroll(object sender, ScrollEventArgs e)
        {
            int r, g, b;
            r = hScrollBar1.Value;
            textBox1.Text = Convert.ToString(r);
            g = hScrollBar2.Value;
            b = hScrollBar3.Value;
            textBox4.BackColor = Color.FromArgb(r, g, b);
        }
        private void hScrollBar2_Scroll(object sender, ScrollEventArgs e)
        {
            int r, g, b;
            r = hScrollBar1.Value;
            g = hScrollBar2.Value;
            textBox2.Text = Convert.ToString(g);
            b = hScrollBar3.Value;
            textBox4.BackColor = Color.FromArgb(r, g, b);
        }
        private void hScrollBar3_Scroll(object sender, ScrollEventArgs e)
        {
            int r, g, b;
            r = hScrollBar1.Value;
            g = hScrollBar2.Value;
            b = hScrollBar3.Value;
            textBox3.Text = Convert.ToString(b);
            textBox4.BackColor = Color.FromArgb(r, g, b);
        }
    }
}
```


Output


Form1

RGB Color Mixing

RED 216

GREEN 97

BLUE 32



Color	Value
RED	216
GREEN	97
BLUE	32

Exp. No. : 7 TABLE CREATION AND SIMPLE QUERIES

AIM: To create table and doing simple queries using comparison operators, logical operators, SET operators, Sorting and Grouping.

PROCEDURE:

The create table as follows:

SQL> Create table student (reg_no number (3), name varchar (25), major number (3), allied number (3));

INSERTING VALUES:

SQL> Insert into student values(101, 'Balu',86,76);

A sample table of student is shown below.

REG_NO	NAME	MAJOR	ALLIED
101	Balu	86	76
102	Bharathy	86	78
103	Vengatesh	67	75
104	Kathiresan	87	78
105	Muthu Krishnan	78	78
106	Diagarajan	76	88

(A) QUERIES FOR USING COMPARISON OPERATOR.

SQL>Select * from Student where major < 75

SQL>Select * from Student where allied > 75

SQL>Select Name from Student where Reg_no = 104

SQL> Select Name from Student where Reg_no <> 104

SQL>Select Name from Student where Reg_no IN(104,105,106)

SQL>Select * from Student where Reg_no NOT IN(102,105)

SQL>Select * from Student where Reg_no BETWEEN 102 AND 106;

SQL>Select Name from Student where name line 'b%';

SQL>Select name from Student where major is not null.

SQL>Select name from Student where major>=any(select allied from student where allied<80);

(B) LOGICAL OPERATORS:

SQL>Select Name from Student where major > 75

SQL>Select Name “OR“from Student where major > 85 OR allied > 85;

SQL>Select Name from STUDENT where NOT major > 80;

(C) ORDERING AND GROUPING:

SQL>Select * from Info;

SQL>Select * from INFO ORDER by Name;

SQL>Select * from INFO ORDER by DEPT;

SQL>Select DEPT, AVG (Marks) from info group by DEPT;

SQL>Select Dept, Avg(Marks) from info group by Dept;

CODE & OUTPUT

```
create table student8(reg_no number(3),name varchar(25),major  
number(3),allied number(3));
```

Table created.

```
insert into student9 values(101,'Balu',86,76)
```

1 row(s) inserted.

```
insert into student9 values(102,' Bharathy ',86,78)
```

1 row(s) inserted.

```
insert into student9 values(103,' Vengatesh ',67,75)
```

1 row(s) inserted.

```
insert into student9 values(104,' kathiresan ',87,78)
```

1 row(s) inserted.

```
insert into student9 values(105,' muthukrishnan ',78,78)
```

1 row(s) inserted.

```
insert into student9 values(105,' diagarajan ',76,88)
```

1 row(s) inserted.

```
select * from student9
```

REG_NO	NAME	MAJOR	ALLIED
101	balu	86	76
102	bharathy	86	78
103	Vengatesh	67	75
104	kathiresan	87	78
105	muthukrishnan	78	78
106	diagarajan	76	88

6 rows selected.

select * from student9 where major<75

REG_NO	NAME	MAJOR	ALLIED
103	Vengatesh	67	75

select * from student9 where allied>75

REG_NO	NAME	MAJOR	ALLIED
101	balu	86	76
102	bharathy	86	78
104	kathiresan	87	78
105	muthukrishnan	78	78
106	diagarajan	76	88

select name "using equal operator" from student9 where REG_NO=104;

using equal operator
kathiresan

select name "using not equal operator" from student9 where REG_NO<>104;

using not equal operator
balu
bharathy
Vengatesh
muthukrishnan
diagarajan

select name "using in operator" from student9 where REG_NO in(104,105,106);

using in operator
kathiresan
muthukrishnan
diagarajan

select * from student9 where REG_NO not in(102,105,107);

REG_NO	NAME	MAJOR	ALLIED
101	balu	86	76
103	Vengatesh	67	75
104	kathiresan	87	78
106	diagarajan	76	88

select name "Bottom" from student9 where reg_no between 102 and 106;

Bottom
bharathy
Vengatesh
kathiresan
muthukrishnan
diagarajan

insert into student9 values(107,'swathy',null,8);

1 row(s) inserted

select name "is full" from student9 where major is null;

is full
swathy

select name "is not null" from student9 where major is not null;

is not null
balu
bharathy
Vengatesh

kathiresan
muthukrishnan
diagarajan

Exp. No. : 8

BUILT IN FUNCTION

Aim : By using any one table, we apply the built in function using SQL Plus

- A. NUMBER FUNCTION
- B. GROUP FUNCTION
- C. COUNT FUNCTION
- D. CHARACTER FUNCTION
- E. DATE FUNCTION

Procedure:

(A) Number Function:

The number function such as tan, exponential, logarithm, mod, power of a no, truncation, sin, cos, tan, cosec, sec, cot, sequence-root, round each be found using the following commands.

(B) Group Function:

The function such as maximum, minimum, average, sum are all group function. They calculated by the queries:

```
SELECT MAX(MAJOR) FROM STUDENT;
```

```
SELECT MIN(MAJOR) FROM STUDENT;
```

```
SELECT AVG(MAJOR) FROM STUDENT;
```

```
SELECT SUM(ALLIED) FROM STUDENT;
```

(C) Count Function:

The total values in a table can be found using the count function.

```
Select count(k) from student;
```

CODE and OUTPUT

```
create table ma9(reg_no number(3),name varchar(25),mark1 number(3),mark2
number(3),mark3 number(3),total number(3),av number(5,2));
```

Table created.

```
insert into ma9 values(101,'balu',86,76,96,null,null);
```

```
select max(av) from ma9;
```

MAX(AV)

86

```
select min(av) from ma9;
```

MIN(AV)

70

```
select avg(mark1)from ma9;
```

AVG(MARK1)

82.2

```
select sum(total)from ma9;
```

SUM(TOTAL)

1162

```
select log(10,100) "log base 10 of 100" from dual;
```

log base 10 of 100

2

```
select power(3,2)"raised"from dual;
```

raised

9

```
select ln (9) "logarithm value for 9" from dual;
```

logarithm value for 9

2.1972245773362193827904904738450514093

select exp(4)"e to the power of 4 "from dual;

e to the power of 4

54.5981500331442390781102612028608784031

select ceil(7.23)from dual;

CEIL(7.23)

8

select floor (7.23)from dual;

FLOOR(7.23)

7

select ceil(7.01)from dual;

CEIL(7.01)

8

select floor(7.99)from dual;

FLOOR(7.99)

7

select mod(19,4)from dual;

MOD(19,4)

3

select sqrt(25)from dual;

SQRT(25)

5

Exp. No. : 9

UPDATE OPERATION

Aim : To update the table using the update command

PROCEDURE:

TABLE STRUCTURE

REG_NO NUMBER(3)

NAME VARCHAR(25)

MAJOR NUMBER(3)

ALLIED NUMBER(3)

VALUES ARE INPUTED BY THE SQL COMMAND,(INPUT :TO THE TABLE);

SQL>INSERT INTO STUDENT VALUES(®_NO,'&NAME',&MAJOR,&ALLIED);

IN THIS TABLE VALUES FOR REG_NO,NAME ARE ALL ENTERED.AFTER INSERTING ALL THE RECORDS,HERE USING ALTER A NEW FIELD **TOT** AS ADDED.

THEN MAJOR AND ALLIED ARE ADDED AND STORED IN THE PLACE OF **TOT**.

SQL COMMAND IS

SQL>UPDATE STUDENT SET TOT=MAJOR+ALLIED.

CODE and OUTPUT:

```
select *from student5
```

REG_NO	NAME	MAJOR	ALLIED
101	balu	86	76
102	bharathy	86	78
103	vengatesh	67	75
104	kathirasen	87	78
105	muthu krishanan	78	78
106	diagarajan		88

6 rows selected

```
Update student set major=85 where reg_no=106;
```

```
1 row updated. Select *from student5;
```

REG_NO	NAME	MAJOR	ALLIED
101	balu	86	76
102	bharathy	86	78
103	vengatesh	67	75
104	kathirasen	87	78
105	muthu krishanan	78	78
106	diagarajan	85	88

6 rows updated.

```
ALTER TABLE STUDENTS5 ADD(TOT NUMBER(3));
```

Table Altered

```
UPDATE STUDENTS5 SET TOT=MAJOR+ALLIED;
```

7 rows updated

```
SELECT* FROM STUDENTS5;
```

REG_NO	NAME	MAJOR	ALLIED	TOT
101	balu	86	76	162
102	bharathy	86	78	164
103	vengatesh	67	75	142
104	kathirasen	87	78	165
105	muthu krishanan	78	78	156
106	diagarajan	85	88	173