



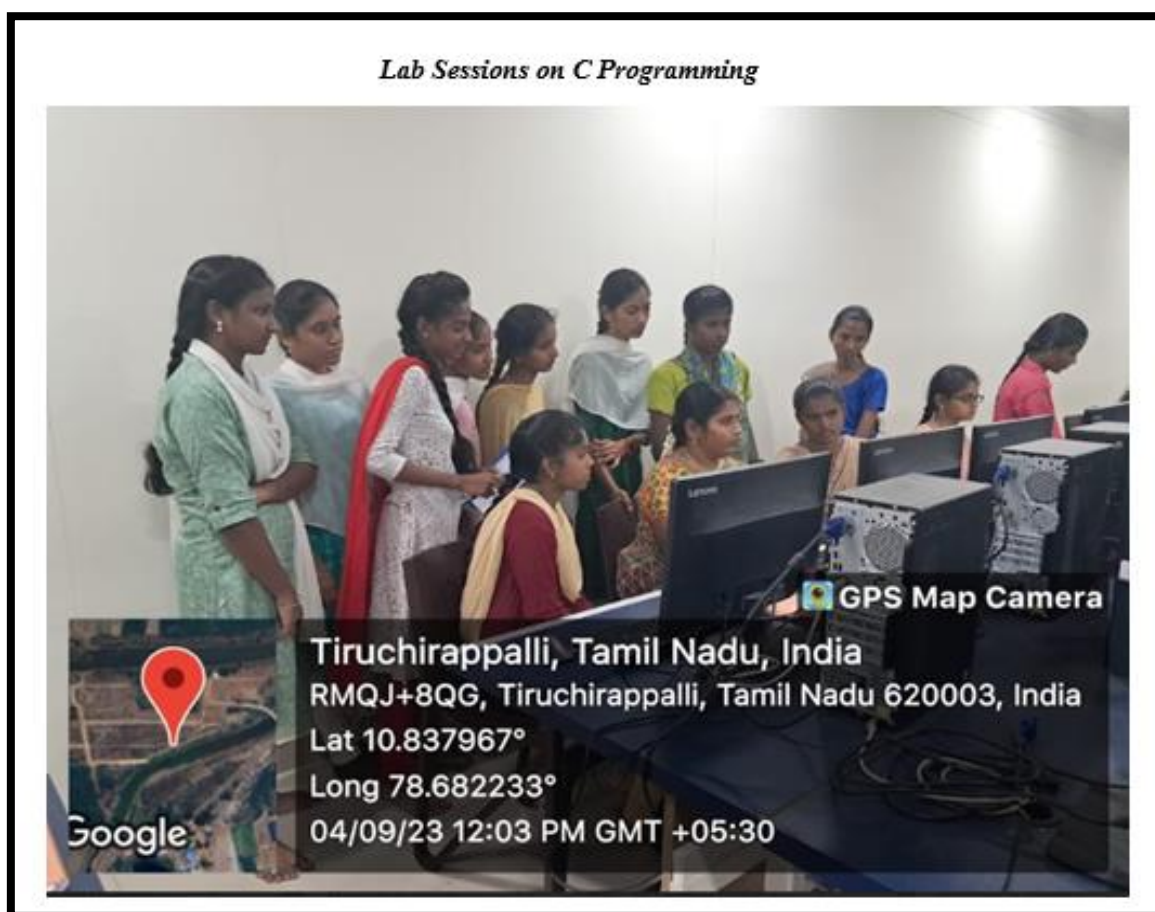
Key Indicator - 2.3 Teaching - Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experience and teachers use ICT- enabled tools including online resources for effective teaching and learning process

Problem Solving – Bugs to Bytes

Program writing, execution, and debugging are fundamental aspects of technical education for students at various levels, from beginners to advanced learners. The process of program writing, execution, and debugging is often scaffolded through structured assignments, projects, and exercises. Students are also engaged in coding competitions and hackathons to apply their skills in practical settings and to further refine their abilities.

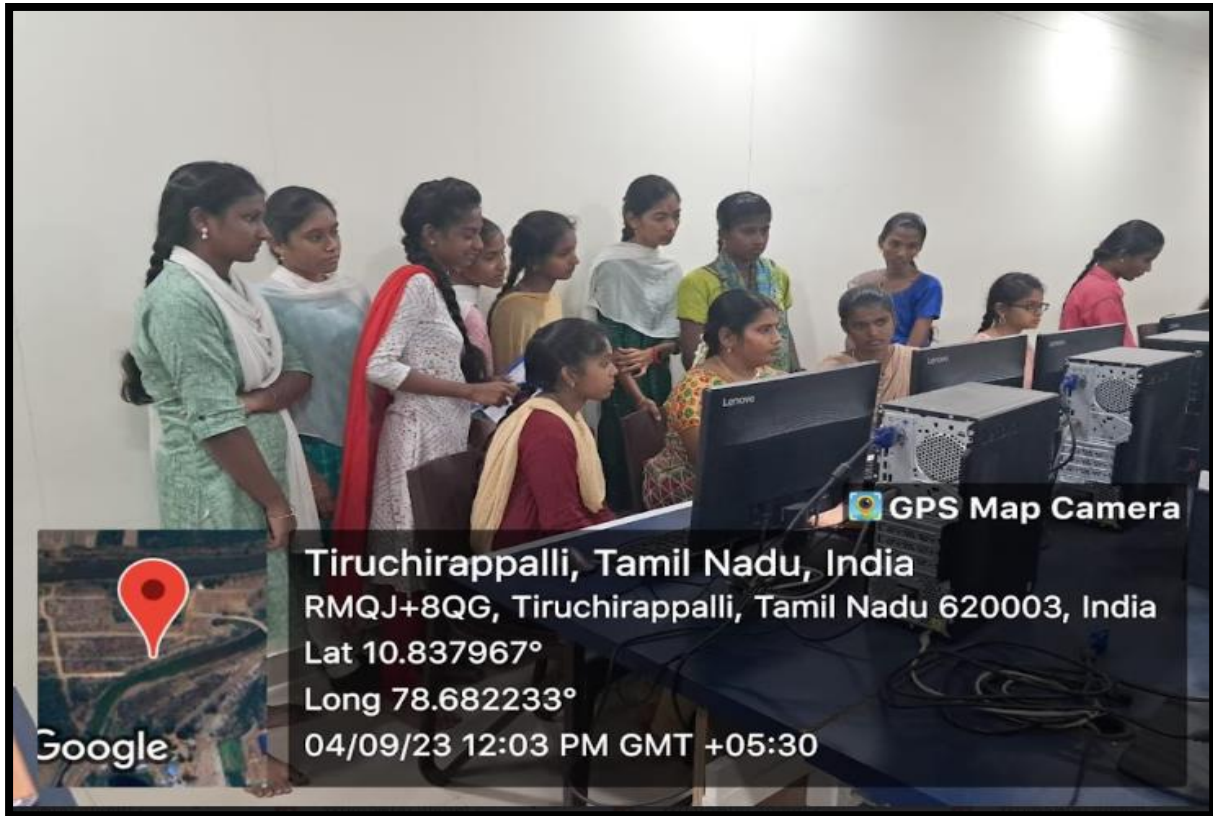
SAMPLE PROOFS





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Computer Science students engaged in debugging in their computer graphics lab session



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Innovative Effort to create a Video using Shotcut Tool by M.Sc C.Sc Students



M.Sc C.Sc students to installing and executing Free Open Source Software



DATASTRUCTURES LAB CODING

```
1 // Online C compiler to run C program online
2 #include <stdio.h>
3 void main()
4 {
5     int i,j,k,temp,n;
6     int a[10];
7     printf("\n Bubble Sort");
8     printf("\n ***** ****");
9     printf("\n Enter the size of the array:");
10    scanf("%d",&n);
11    printf("%d",n);
12    printf("\nEnter the element:\n");
13    for(i=0;i<n;i++)
14    {
15        scanf("%d",&a[i]);
16    }
17    printf("\nUnsorted list\n");
18    for(i=0;i<n;i++)
19    {
20        printf("%d",a[i]);
21    }
22    for(i=0;i<n;i++)
23    {
24        for(j=0;j<n-i;j++)
25        {
26            if(a[j]>a[j+1])
27                temp=a[j];
28                a[j]=a[j+1];
29                a[j+1]=temp;
30        }
31    }
32    printf("\nSorted list\n");
33    for(i=0;i<n;i++)
34    {
35        printf("%d",a[i]);
36    }
37 }
```

Output

```
Bubble Sort
***** ****
Enter the size of the array:4
4
Enter the element:
100 99 88 77
Unsorted list
100 99 88 77
After pass 0: 99 88 77 100
After pass 1: 88 77 99 100
After pass 2: 77 88 99 100
After pass 3: 77 88 99 100
```

```
1 // Online C compiler to run C program online
2 #include <stdio.h>
3 void main()
4 {
5     int i,item,s,loc=1;
6     int a[10];
7     printf("\n Linear search");
8     printf("\n ***** ****");
9     printf("\n Enter the size of the array:");
10    scanf("%d",&n);
11    printf("%d",n);
12    printf("\nEnter the elements:\n");
13    for(i=0;i<n;i++)
14    {
15        scanf("%d",&a[i]);
16    }
17    printf("\nelements in the array are\n");
18    for(i=0;i<n;i++)
19    {
20        printf("%d",a[i]);
21    }
22    printf("\nEnter the item to be searched:");
23    scanf("%d",&item);
24    printf("%d",item);
25    for(i=0;i<n;i++)
26    {
27        if(a[i]==item)
28            loc=i+1;
29    }
30    printf("\nItem found at location:%d",loc);
31 }
```

Output

```
Linear search
***** ****
Enter the size of the array:5
5
Enter the elements:
21 31 41 51 61
elements in the array are
21 31 41 51 61
Enter the item to be searched:51
51
Item found at location:3
```



DATASBASE MANAGEMENT SYSTEMS LAB

Ex: 2 Set operations

Jayalakshmi R cs Turned in

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SQL Statement:

```
CREATE TABLE Section
(
Courseid varchar,
Semester varchar,
Year int,
Roomno);
```

Edit the SQL Statement, and click "Run"

Files: Turned in on Jul 6, 2021, 9:22 AM

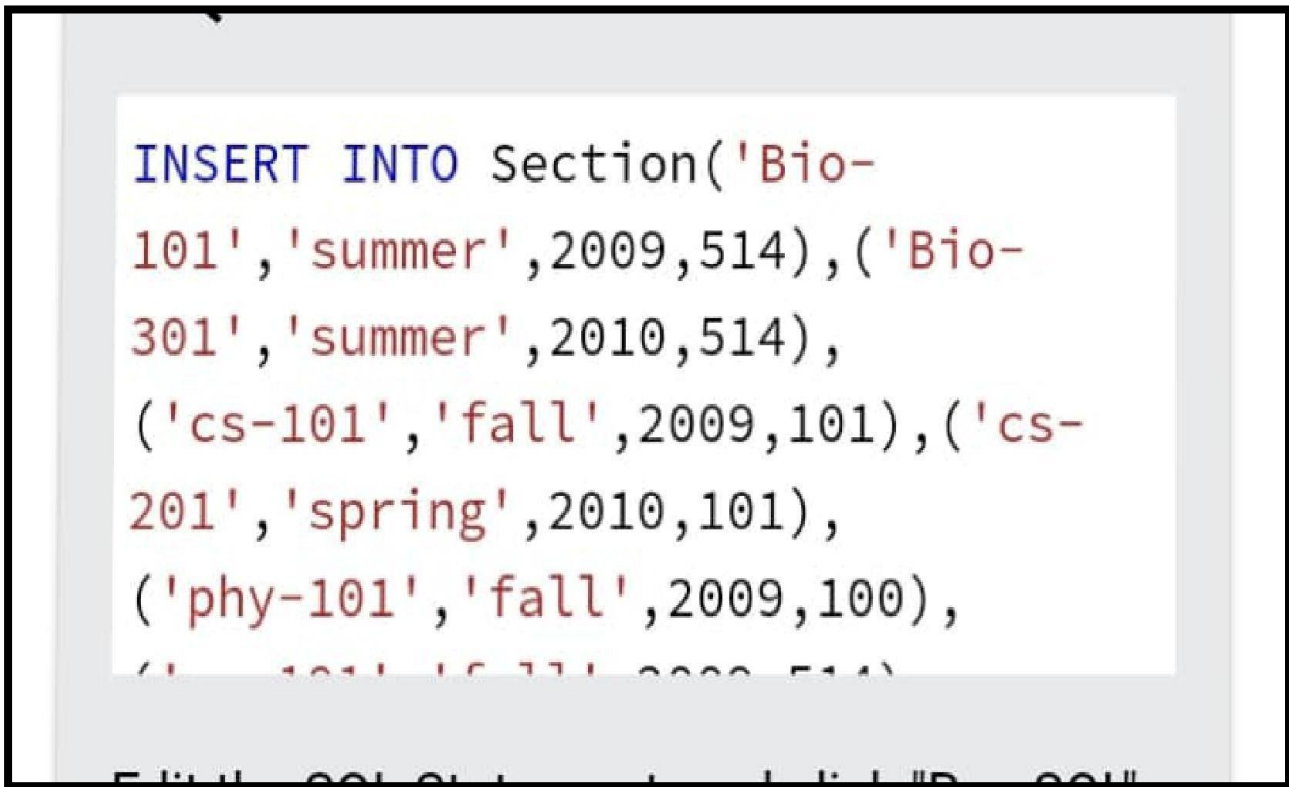
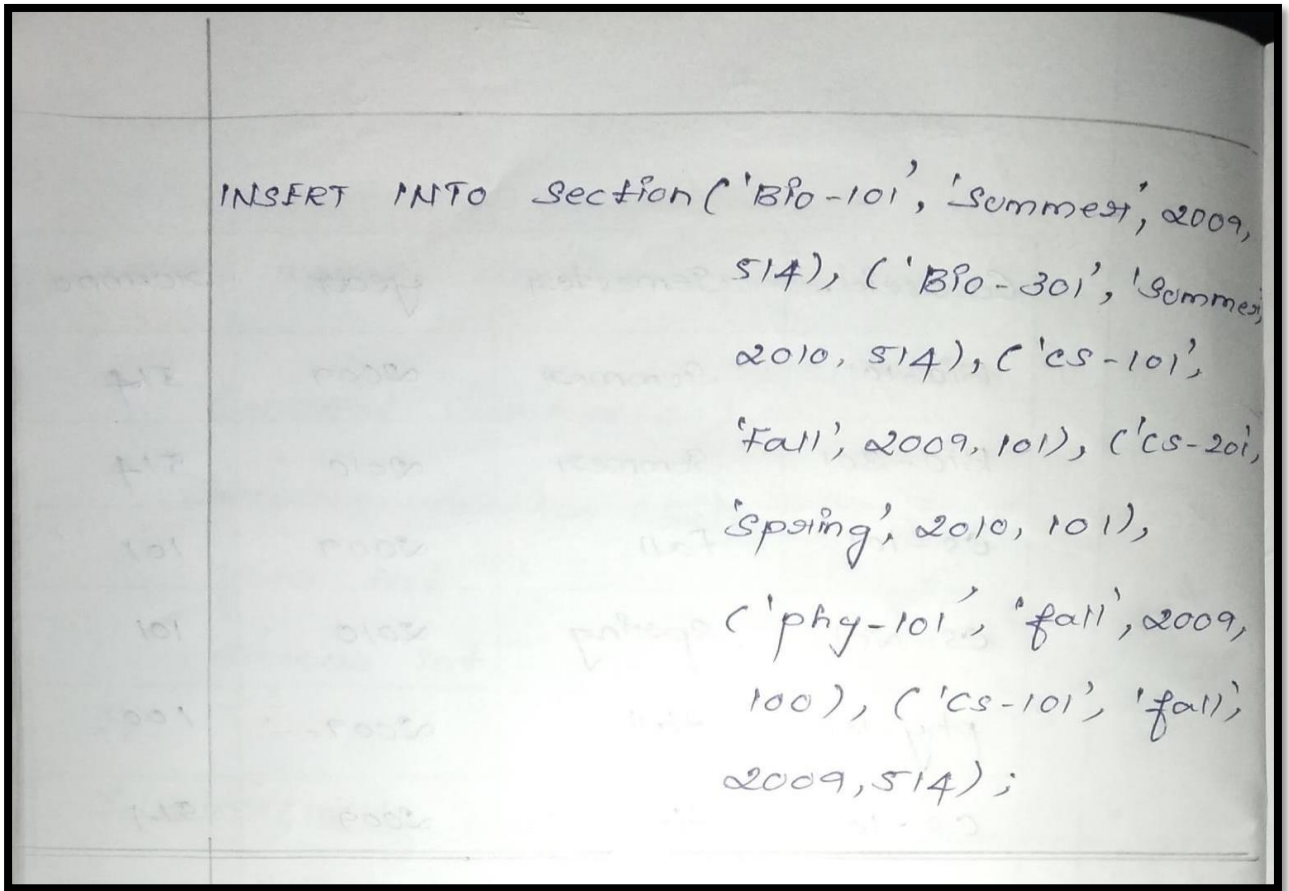
Grade: /10

Private comments: Add private comment...

Courseid.	Semester	year	roomno
Bio-101	Summer	2009	51A
Bio-301	Summer	2010	51A
CS-101	Fall	2009	101
CS-201	Spring	2010	101
Phy-101	Fall	2009	100
CS-101	Fall	2009	51A

Section.

```
CREATE TABLE Section
(
Courseid varchar (20),
Semester varchar (20),
Year int,
Roomno int
);
```





Result:

Number of Records: 6

courseid	semester	syear	roomno
Bio-101	summer	2009	514
BIO-301	Summer	2010	514
cs-101	spring	2010	101
cs-201	spring	2010	101
phy-101	fall	2009	1001
cs-101	fall	2009	514

Ex: 2 Set operations

Jenova S cs Turned in

jenova s.pdf

Turned in on Jul 5, 2021, 9:35 PM

Grade: /10

Private comments: Add private comment...

```

CREATE TABLE Section
(
  Courseid varchar ,
  Semester varchar ,
  Year int ,
  Room no);

INSERT INTO Section
VALUES (' Bio-101', ' Summer', 2009 , 514),
(' Bio-301', ' Summer', 2010 , 514)

```



AFTER PERFORMING THE KEY FRAME ANIMATION ON THE MAIN CHARACTER IMAGE



CREATE TABLE Section

C
Courseid varchar,
Semester varchar,
Year int,
Room no);

INSERT INTO Section

VALUES ('Bio - 101', 'Summer', 2009, 514),
('Bio - 301', 'Summer', 2010, 514),
('CS - 101', 'fall', 2009, 101),
('CS - 201', 'spring', 2010, 101),
('Phy - 101', 'fall', 2009, 100),
('CS - 101', 'fall', 2009, 514).

SELECT * FROM [Section]

Courseid	Semester	Year	Roomno.
Bio - 101	Summer	2009	514
Bio - 301	Summer	2010	514
CS - 101	fall	2009	101
CS - 201	spring	2010	101
Phy - 101	fall	2009	100
CS - 101	fall	2009	514



SQL Statement:

```
CREATE TABLE Section  
(  
Courseid varchar,  
Semester varchar,  
Year int,  
Roomno);
```

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL »

Result:

You have made changes to the database.

```
INSERT INTO Section  
VALUES('Bio-  
101', 'summer', 2009, 514), ('Bio-  
301', 'summer', 2010, 514), ('Cs-  
101', 'fall', 2009, 101), ('CS-  
201', 'spring', 2010, 101), ('Phy-  
101', 'fall', 2009, 100), ('Cs-
```

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL »

Result:

You have made changes to the database. Rows affected: 6



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```
SELECT Courseid FROM Section
WHERE (Semester='summer' and
Year='2009')
UNION ALL
SELECT Courseid FROM Section
WHERE (Semester='fall' and
Year='2009');
```

Edit the SQL Statement, and click "Run SQL" to see the result.

[Run SQL >>](#)

Result:

Number of Records: 4

Courseid
Bio-101
Cs-101
Phy-101
Cs-101

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SQL Statement:

```
SELECT * FROM [Section]
```

Edit the SQL Statement, and click "Run SQL" to see the result.

[Run SQL >](#)

Result:

Number of Records: 6

Courseid	Semester	Year	Roomno
Bio-101	summer	2009	514
Bio-301	summer	2010	514
Cs-101	fall	2009	101
CS-201	spring	2010	101
Phy-101	fall	2009	100
Cs-101	fall	2009	514



CRITERION II

BUGS TO BYTES



TROUBLESHOOTING A PERSONAL COMPUTER



Bugs to Bytes are a valuable problem-solving methodology that helps developers identify, analyse, and resolve software bugs effectively. By following a structured approach, collaborating with stakeholders, and leveraging lessons learned, developers can improve software quality, enhance user experience, and drive continuous improvement in software development processes.