```c
#include<stdio.h>
#include<math.h>
void cylinder();
void cone();
void sphere();
int main()
{
    int ch;
    do
    {

    printf("1.cylinder 2.cone 3.sphere 4.exit \n");
    printf("enter your choice\n");
    scanf("%d",&ch);
    switch(ch)
    {
    case 1:
    cylinder();
    break;
    case 2:
    cone();
    break;
    case 3:
    sphere();
    break;
    case 4:
    printf("exit\n");
    break;
    default:
    printf("enter correct value\n");
    }
    }while(ch!=4);
    return 0;
}
void cylinder()
{
    float a,v,r,h;
    printf("enter the radius and height\n");
    scanf("%f %f",&r,&h);
    a=(2*3.14*r*h)+(2*3.14*r*r);
```

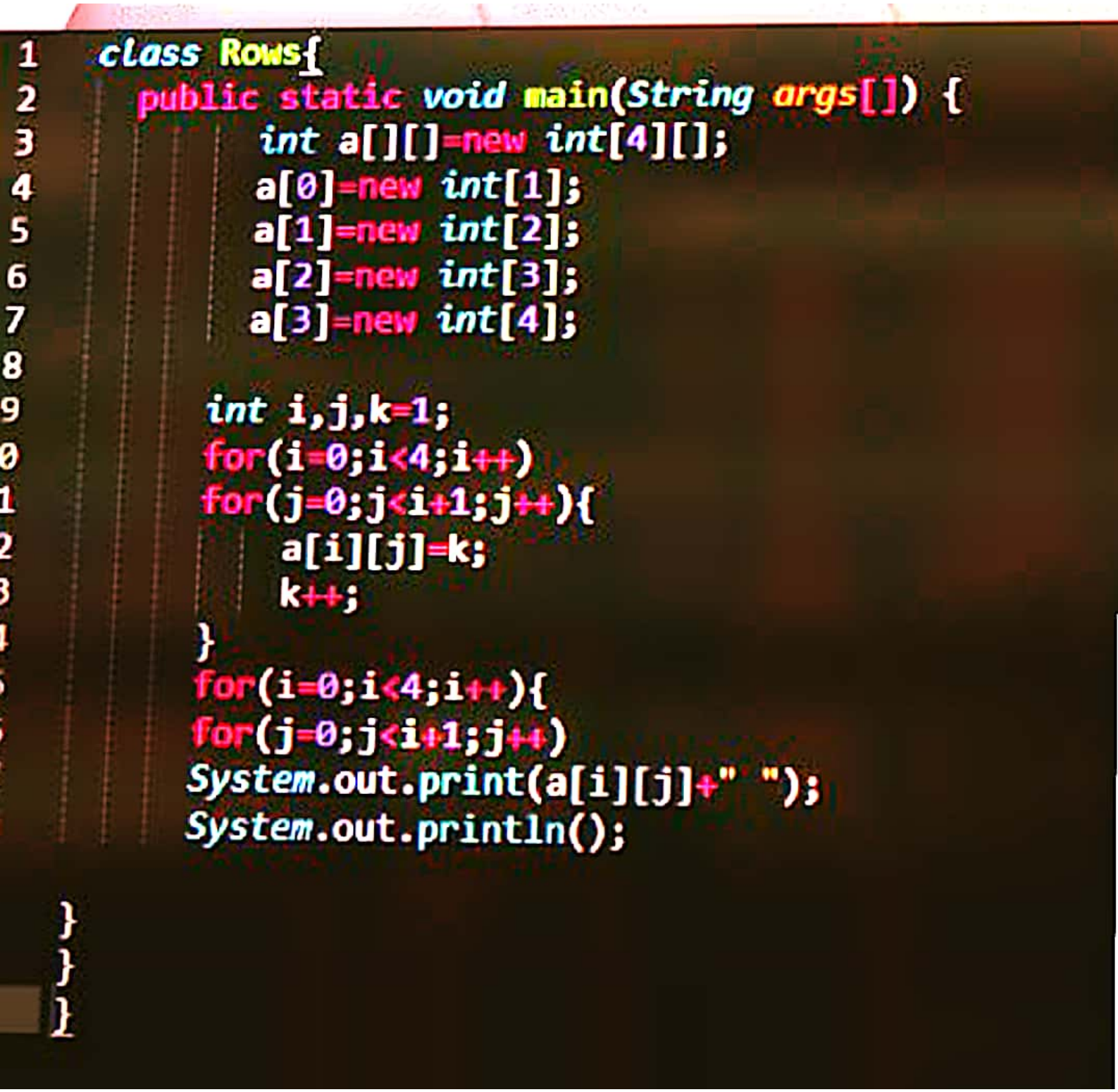
```
41      v=(3.14*r*r*h);
42      printf("Area:%f ; Volume:%f \n",a,v);
43
44  }
45  void cone()
46  {
47      float a,v,r,h,x;
48      printf("enter the radius and height\n");
49      scanf("%f %f",&r,&h);
50      x=sqrt((h*h)+(r*r));
51      a=(3.14*r*(r+x));
52      v=(3.14*r*r*(h/3.0));
53      printf("Area:%f ; Volume:%f \n",a,v);
54
55  }
56  void sphere()
57  {
58
59      float a,v,r;
60      printf("enter the radius and height\n");
61      scanf("%f",&r);
62
63      a=4*3.14*r*r;
64      v=(4.0/3.0)*3.14*r*r*r;
65      printf("Area:%f ; Volume:%f \n",a,v);
66
67  }
```

```
1.cylinder 2.cone 3.sphere 4.exit
enter your choice
1
enter the radius and height
5 10
Area:471.000000 ; Volume:785.000000
1.cylinder 2.cone 3.sphere 4.exit
enter your choice
2
enter the radius and height
7 15
Area:517.693726 ; Volume:769.299988
1.cylinder 2.cone 3.sphere 4.exit
enter your choice
3
enter the radius and height
8 13
Area:803.840027 ; Volume:2143.573242
1.cylinder 2.cone 3.sphere 4.exit
enter your choice
enter correct value
1.cylinder 2.cone 3.sphere 4.exit
enter your choice
```

dslab.c | lab1.html | practice.html

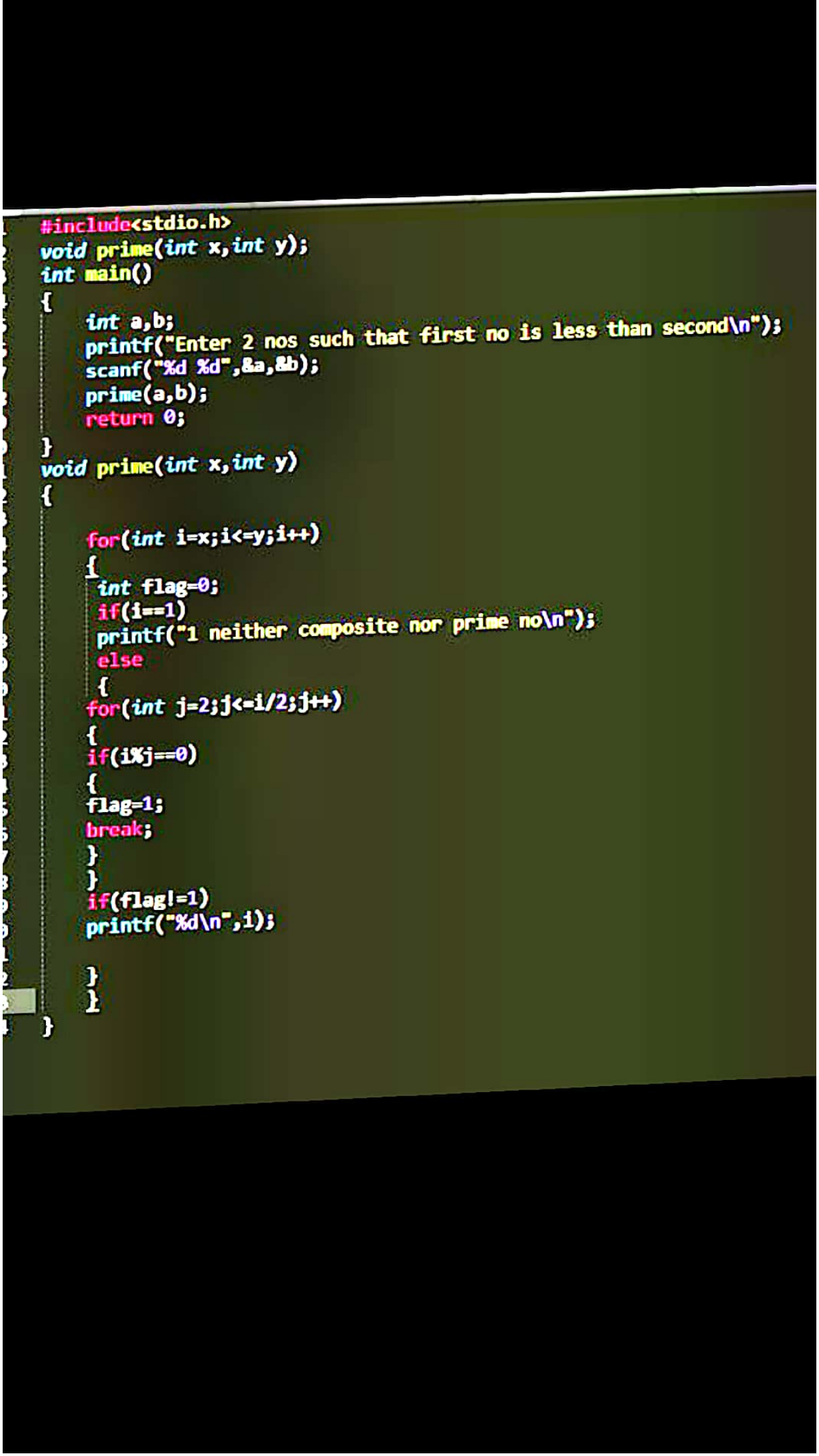
```java
import java.util.*;
class grades
{
public static void main(String[] args)
{
    int cie,see;
    double z,total;
    Scanner sc=new Scanner(System.in);
    System.out.println("enter cie marks out of 50");
    cie=sc.nextInt();
    System.out.println("enter see marks out of 100");
    see=sc.nextInt();
    z=see/2.0;
    total=z+cie;
    if(total>=90 && total<=100)
    System.out.println("Grade: S");
    else if(total>=80 && total<=89)
    System.out.println("Grade: A");
    else if(total>=70 && total<=79)
    System.out.println("Grade: B");
    else if(total>=60 && total<=69)
    System.out.println("Grade: C");
    else if(total>=50 && total<=59)
    System.out.println("Grade: D");
    else if(total>=40 && total<=49)
    System.out.println("Grade: E");
    else
    System.out.println("Grade: F");

}
```

```
C:\Users\rahul>cd C:\workspace

C:\workspace>javac grades.java

C:\workspace>java grades
enter cie marks out of 50
40
enter see marks out of 100
80
Grade: A

C:\workspace>
```



```
class Rows{
    public static void main(String args[]) {
        int a[][]=new int[4][];
        a[0]=new int[1];
        a[1]=new int[2];
        a[2]=new int[3];
        a[3]=new int[4];

        int i,j,k=1;
        for(i=0;i<4;i++)
        for(j=0;j<i+1;j++){
            a[i][j]=k;
            k++;
        }
        for(i=0;i<4;i++){
        for(j=0;j<i+1;j++)
        System.out.print(a[i][j]+" ");
        System.out.println();

    }
    }
    }
```

```
C:\workspace>java Rows
1
2 3
4 5 6
7 8 9 10

C:\workspace>
```



```c
#include<stdio.h>
void prime(int x,int y);
int main()
{
    int a,b;
    printf("Enter 2 nos such that first no is less than second\n");
    scanf("%d %d",&a,&b);
    prime(a,b);
    return 0;
}
void prime(int x,int y)
{

    for(int i=x;i<=y;i++)
    {
     int flag=0;
     if(i==1)
     printf("1 neither composite nor prime no\n");
     else
     {
    for(int j=2;j<=i/2;j++)
    {
    if(i%j==0)
    {
    flag=1;
    break;
    }
    }
    if(flag!=1)
    printf("%d\n",i);

    }
    }
}
```

```
Enter 2 nos such that first no is less than second
4 6
5


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

```c
#include <stdio.h>
#include <math.h>

int main()
{
    char name[5][20];
    int ele[20];
    int i, j, x, ctr1, ctr2, ctr3;
    ctr1 = ctr2 = ctr3 =0;
    for (i = 0; i < 5; i++)
    {
        printf("Enter name of student %d\n", i + 1);
        scanf("%s", name[i]);
        printf("---CHOICE OF ELECTIVES---\n");
        printf("1. Internet of Things\n");
        printf("2. Advanced Java and J2EE\n");
        printf("3. Advanced Data Structures\n");
        printf("Enter your choice!\n");
        scanf("%d", &ele[i]);
    }
    printf("---CHOICE OF ELECTIVES---\n");
    printf("1. Internet of Things\n");
    printf("2. Advanced Java and J2EE\n");
    printf("3. Advanced Data Structures\n");
    printf("Enter the elective for which you want\nto display the student :\n");
    scanf("%d", &x);
    for(i = 0; i < 5; i++)
    {
        if(ele[i] == x)
        {
            printf("Name %d : %s\n",i+1, name[i]);
        }
    }
    for(i = 0; i < 5; i++)
    {
        if (ele[i] == 1)
            ctr1++;
        else if (ele[i] == 2)
            ctr2++;
        else
```

```
        ctr3++;
}
printf("The number of students in Elective 1 are : %d\n", ctr1);
printf("The number of students in Elective 2 are : %d\n", ctr2);
printf("The number of students in Elective 3 are : %d\n", ctr3);

if (ctr1 < 2)
{
    printf("Course 1 has been floated!\n");
    for(i=0; i < 5; i++)
    {
        if(ele[i] == 1)
        {
            printf("2. Advanced Java and J2EE\n");
            printf("3. Advanced Data Structures\n");
            printf("Enter your choice!\n");
            scanf("%d", &ele[i]);
        }
    }
}
else if (ctr2 < 2)
{
    printf("Course 2 has been floated!\n");
    for(i=0; i < 5; i++)
    {
        if(ele[i] == 2)
        {
            printf("1. Internet of Things\n");
            printf("3. Advanced Data Structures\n");
            printf("Enter your choice!\n");
            scanf("%d", &ele[i]);
        }
    }
}
else
{
    printf("Course 3 has been floated!\n");
    for(i=0; i < 5; i++)
    {
        if(ele[i] == 3)
```

```
            {
                printf("1. Internet of Things\n");
                printf("2. Advanced Java and J2EE\n");
                printf("Enter your choice!\n");
                scanf("%d", &ele[i]);
            }
        }
    }
    ctr1 = ctr2 = ctr3 =0;
    for(i = 0; i < 5; i++)
    {
        if (ele[i] == 1)
            ctr1++;
        else if (ele[i] == 2)
            ctr2++;
        else
            ctr3++;
    }
    printf("The number of students in Elective 1 are : %d\n", ctr1);
    printf("The number of students in Elective 2 are : %d\n", ctr2);
    printf("The number of students in Elective 3 are : %d\n", ctr3);

    if (ctr1 != 0)
    {
        printf("---THE STUDENTS IN ELECTIVE 1---\n");
        for(i = 0; i < 5; i++)
        {
            if(ele[i] == 1)
                printf("Name %d : %s\n", i+1,name[i]);
        }
    }
    if (ctr2 != 0)
    {
        printf("---THE STUDENTS IN ELECTIVE 2---\n");
        for(i = 0; i < 5; i++)
        {
            if(ele[i] == 2)
                printf("Name %d : %s\n", i+1, name[i]);
        }
    }
```

```
if (ctr3 != 0)
{
    printf("---THE STUDENTS IN ELECTIVE 3---\n");
    for(i = 0; i < 5; i++)
    {
        if(ele[i] == 3)
            printf("Name %d : %s\n", i+1, name[i]);
    }
}
return 0;
```

```
Enter name of student 1
rahul
---CHOICE OF ELECTIVES---
1. Internet of Things
2. Advanced Java and J2EE
3. Advanced Data Structures
Enter your choice!
1
Enter name of student 2
suresh
---CHOICE OF ELECTIVES---
1. Internet of Things
2. Advanced Java and J2EE
3. Advanced Data Structures
Enter your choice!
1
Enter name of student 3
mythili
---CHOICE OF ELECTIVES---
1. Internet of Things
2. Advanced Java and J2EE
3. Advanced Data Structures
Enter your choice!
2
Enter name of student 4
ramesh
---CHOICE OF ELECTIVES---
1. Internet of Things
```