

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

```
int main()
```

```
{
```

```
int n;
```

```
printf("Enter a number:");
```

```
scanf("%d", &n);
```

```
int i, j;
```

```
int k=1;
```

```
for (i=1; i<=n; i++)
```

```
{
```

```
for (j=0; j<i; j++)
```

```
{
```

```
printf("%d", k);
```

```
k++;
```

```
}
```

```
printf("\n");
```

```
}
```

```
return 0;
```

```
}
```

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

```
int main()
```

```
{
```

```
float cie_marks, see_marks;
```

```
printf("Enter cie and see marks");
```

```
scanf("%f %f", &cie_marks, &see_marks);
```

```
float total = cie_marks + (see_marks/2);
```

```
printf("The Grade of student:");
```

```
if (total >= 90)
```

```
printf("S\n");
```

```
else if (total >= 80 && total < 90)
```

```

printf("A\n");
else if (total >= 70 && total < 80)
printf("B\n");
else if (total >= 60 && total < 70)
printf("C\n");
else if (total >= 50 && total < 60)
printf("D\n");
else if (total >= 40 && total < 50)
printf("E\n");
else
printf("F\n");
return 0;
}

```

```

③ #include <stdio.h>
int main()
{
int a, b;
printf("Enter 2 integers:");
scanf("%d %d", &a, &b);

```

```

int i, j, k;
printf("The prime numbers between %d and %d:\n", a, b);
for (i = a; i <= b; i++)
{
for (j = 2; j <= i/2; j++)
{
if (i % j == 0)
{
k = 0;
break;
}
}
else
k = 1;

```


}
 if (k==1)
 printf("%d\n", i);
 }
 return 0;
 }

④ #include <stdio.h>

#include <math.h>

int main()

{

int m, i;

printf("1: Find the volume and area of cylinder\n");

printf("2: Find the volume and area of cone\n");

printf("3: Find the volume and area of sphere\n");

printf("4: to quit\n");

while(i)

{ printf("enter your choice\n");

scanf("%d", &m);

if(m==1)

{

int a, b;

float c, d;

printf("enter the values of height and radius of cylinder\n");

scanf("%d %d", &a, &b);

c = (2 * 3.14 * b * a) + (2 * 3.14 * b * b);

d = 3.14 * b * b * a;

printf("the volume and area of cylinder are %f, %f\n", d, c);

}

else if(m==2)

{

int e, f;

```
float g, h;
```

```
printf("enter the values of height and radius of cone\n");
```

```
scanf("%d %d", &e, &f);
```

```
g = 3.14 * f * (f + sqrt(e * e + f * f));
```

```
h = (3.14 * f * f * e) / 3;
```

```
printf("the volume and area of cone are %.f %.f\n", h, g);
```

```
}
```

```
else if (m == 3)
```

```
{
```

```
int j;
```

```
float l, o;
```

```
printf("enter the value of radius\n");
```

```
scanf("%d", &j);
```

```
l = 4 * 3.14 * j * j;
```

```
o = (4 * 3.14 * j * j * j) / 3;
```

```
printf("the volume and area of sphere are %.f %.f\n", o, l);
```

```
}
```

```
else if (m == 4)
```

```
break;
```

```
else
```

```
printf("entered invalid choice\n");
```

```
}
```

```
return 0;
```

```
}
```

```
⑤ #include <stdio.h>
```

```
#include <string.h>
```

```
int main()
```

```
{
```

```
const int n;
```

```
printf("enter the number of students.");
```

```
scanf("%d", &n);
```

```
printf("Choose the option:\n");
```



```
printf("1 - Internet of things\n");
printf("2 - Advanced Java\n");
printf("3 - Advanced Data Structures\n");
char names[n][20];
int choice[n];
char iot[n][20];
char aj[n][20];
char ads[n][20];
int iotc=0, ajc=0, adsc=0;
int i;
printf("Enter the names of choice of students:\n");
for(i=0; i<n; i++)
{
    printf("%d:", i+1);
    scanf("%s %d", names[i], &choice[i]);
}
for(i=0; i<n; i++)
{
    if(choice[i]==1)
    {
        strcpy(iot[iotc], names[i]);
        iotc++;
    }
    else if(choice[i]==2)
    {
        strcpy(aj[ajc], names[i]);
        ajc++;
    }
    else if(choice[i]==3)
    {
        strcpy(ads[adsc], names[i]);
        adsc++;
    }
}
```

```

}
printf("The students in lot:\n");
for (i=0; i<iotc; i++)
    printf("%s\n", lot[i]);
5 printf("The students in aj:\n");
for (i=0; i<ajc; i++)
    printf("The students in ads:\n");
for (i=0; i<adsc; i++)
    printf("%s\n", ads[i]);

```

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```

if (iotc < 5)
{

```

```

    printf("The number of students are less in lot, please
    choose other courses.\n");

```

15

```

    int choice = iot[iotc];

```

```

    for (i=0; i<iotc; i++)
    {

```

```

        printf("%s", lot[i]);

```

```

        scanf("%d", &choice - iot[i]);

```

20

```

    }

```

```

    for (i=0; i<iotc; i++)
    {

```

```

        if (choice - iot[i] == 2)
        {

```

```

            strcpy(aj[ajc], iot[i]);

```

25

```

            ajc++;

```

```

        }

```

```

    }

```

```

    else if (choice - iot[i] == 3)
    {

```

```

        strcpy(ads[adsc], iot[i]);

```

30

```

        adsc++;

```

```

    }

```

```

}

```

```

}

```


printf("The students in aj:\n");

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

printf("%s\n", aj[i]);

printf("The students in ads:\n");

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

printf("%s\n", ads[i]);

}

else if (ajc < 5)

{
printf("The number of students are less in aj, please choose
other courses\n");

int choice = aj[ajc];

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

{

printf("%s", aj[i]);

scanf("%d", &choice - aj[i]);

}

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

{

if (choice - aj[i] == 2)

{

strcpy(iot[iotc], aj[i]);

iotc++;

}

else if (choice - aj[i] == 3)

{

strcpy(ads[adsc], aj[i]);

adsc++;

}

}

printf("The students in iot:\n");

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

printf("%s\n", iot[i]);

```
printf("The students in ads:\n");  
for (i=0; i<adsc; i++)  
printf("%s\n", ads[i]);
```

```
}
```

```
else if (adxc < 5)
```

```
{  
printf("The number of students are less in ads, please  
choose other courses.\n");
```

```
int choice = ads[adsc];
```

```
for (i=0; i<adsc; i++)
```

```
{
```

```
printf("%s", ads[i]);
```

```
scanf("%d", &choice = ads[i]);
```

```
}
```

```
for (i=0; i<adsc; i++)
```

```
{
```

```
if (choice == ads[i])
```

```
{
```

```
strcpy(iot[iotc], ads[i]);
```

```
iotc++;
```

```
}
```

```
else if (choice == ads[i])
```

```
{
```

```
strcpy(aj[ajc], ads[i]);
```

```
ajc++;
```

```
}
```

```
}
```

```
printf("The students in iot:\n");
```

```
for (i=0; i<iotc; i++)
```

```
printf("%s\n", iot[i]);
```

```
printf("The set students in aj:\n");
```

```
for (i=0; i<ajc; i++)
```

```
printf("%s\n", aj[i]);
```

```
return 0;
```