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1BM19CS008

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Week 2

- 3) Write C program to accept 'n' from the user and print n rows of output as given below

n = 4

1			
2	3		
4	5	6	
7	8	9	10

A) #include <stdio.h>

```
int main()
```

```
{
```

```
    int n, i, j, m;
```

```
    printf("Enter the no. of rows);
```

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

```
    i = 1;
```

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

```
    {
```

```
        for (m = 0; m < n; m++)
```

```
        {
```

```
            if (m <= j)
```

```
            {
```

```
                printf("%d\t", i);
```

```
                i++;
```

```
            }
```

```
        }
```

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

```
    }
```

```
    return 0;
```

```
}
```

4) Write C program to accept CIE marks (out of 50) of a student and print his/her grade. Use if... else if ladder.

```
A) #include <stdio.h>
int main()
{
    int m
    printf("Enter the marksout of 100");
    scanf("%d", &m);
    if (m >= 90)
    {
        printf("grade = 5 S\n");
    }
    else if (m >= 80)
        printf("A grade");
    else if (m >= 70)
        printf("B grade");
    else if (m >= 60)
        printf("C grade");
    else if (m >= 50)
        printf("D grade");
    else if (m >= 40)
        printf("E grade");
    else printf("FAIL");
    return 0;
}
```


- 5) Write a C prog. to print the prime numbers between given two integers (inclusive). Accept from user.

A) #include <stdio.h>

int main()

{

int a, b, c, i, j;

printf("Enter two numbers");

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

for(i=a; i<=b; i++)
{

if(i==1 || i==0)
continue;

c=1;

for(j=2; j<=i/2; ++j)
{

if(i%j==0)
{

c=0;
break;

}
if(c==1)
printf("%d\t", i);

}

return 0;

}

6) Prints area & volume of shapes, until user wants to stop.

A) `#include <stdio.h> #include <math.h>`
`int main()`

`{`
`int a; float area, volume, r, h;`
`do { printf("Which shape 1. Cylinder\n`
`2. Cone\n 3. sphere\n");`

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

`while (a != 4)`

`{`

`switch(a)`

`{`

`Case 1: { printf("input radius and height");`

`scanf("%f %f", &r, &h);`

`area = (2 * 3.14 * r * h) + (2 * 3.14 * r * r);`

`volume = (3.14 * r * r * h);`

`break;`

`Case 2: {`

`printf("input radius and height");`

`scanf("%f %f", &r, &h);`

`area = 3.14 * r * (r + sqrt((h * h) + (r * r)));`

`volume = (3.14 * r * r * h) / 3;`

`}`

`break;`


```

Case 3: { printf("input radius");
          scanf("%d", &r);
          area = 4 * 3.14 * r * r;
          volume = (3.14 * r * r * r * 4) / 3;
          break;
        }

```

```

    }
    printf("the area = %f\n", area);
    printf("the volume = %f\n", volume);
} while (a != 4);
return 0;
}

```

7) Count the no. of students registered for 3 elective courses. Accept names of n students, their choice of the elective.

1. Accept say x from user. Display names of students who opted for elective x .
2. Count and display the total no. of students in each elective.
3. if count less than ~~20~~ 5, inform the course will not be floated and ask the students who have opted the course to reselect their electives from the other two. Count and display the counts again.
4. Display the name of students in each electives.