

Course Name: O Level (2nd Sem B3 and B2 Batch)
Topic: Pattern Printing with Loops

Subject: C Language
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Example.1: Program to print the numeric pyramid:

```
#include <stdio.h>
#include <conio.h>
main()
{
    int r,c,s;
    clrscr();
    for(r=1;r<=5;r++)
    {
        for(s=5;s>r;s--)
            printf("%c",32);
        for(c=1;c<=r;c++)
            printf("%d",c);
        for(c=2;c>=1;c--)
            printf("%d",c);
        printf("\n");
    }
    getch();
}
```

Output

```
  1
 121
12321
1234321
123454321
```

Example.2: Program to print the following pattern:

```
#include <stdio.h>
#include <conio.h>
main()
{
    int r,c,s,x;
    clrscr();
    for(r=1;r<=9;r+=2)
    {
        for(s=9;s>r;s-=2)
            printf("%c",32);
        for(c=1;c<=r;c+=2)
            printf("%d",c);
        printf("\n");
    }
    for(r=7;r>=1;r-=2)
    {
        for(s=9;s>r;s-=2)
            printf("%c",32);
        for(c=1;c<=r;c+=2)
            printf("%d",c);
        printf("\n");
    }
    getch();
}
```

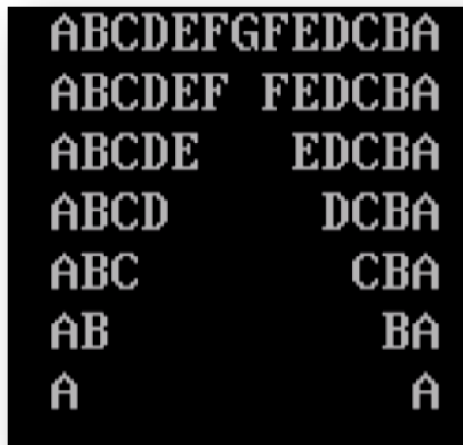
Output

```
  1
  13
 135
1357
13579
 1357
  135
  13
  1
```

Example.3: Program to print the following pattern:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int i,j,k=71,l=-1,s;
    clrscr();
    for(i=1;i<=7;i++)
    {
        for(j=65;j<=k;j++)
            printf("%c",j);
        if(i==1)
            j--;
        else
            for(s=1;s>=1;s--)
                printf(" ");
            for(j--;j>=65;j--)
                printf("%c",j);
            printf("\n");
            l=l+2;
            k--;
        }
    getch();
}
```

Output



Try yourself:

1. Rewrite the above examples with the help of while loop.
2. Write a program to print the character pyramid.
3. Write a program to print the following patterns:

