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Course: C, DSA and C++

Assignment 6: Pattern simple nested for loop

Q.1. WAP to print /* 1 2 3 4

2 3 4 5

3 4 5 6

4 5 6 7 */

```
aditi@DESKTOP-ANL3TOH: /n × + v
/* 1 2 3 4
   2 3 4 5
   3 4 5 6
   4 5 6 7 */

#include<stdio.h>

void main()
{
    int row;
    printf("Enter the number of rows:\n");
    scanf("%d",&row);
    int num=1;
    int org;
    for(int i=1;i<=row;i++)
    {
        org=num;
        for(int j=1;j<=row;j++)
        {
            printf("%d ",num);
            num++;
        }
        printf("\n");
        num=org+1;
    }
}
```

Output:

```

aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques1.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques1.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
Enter the number of rows:
4
1 2 3 4
2 3 4 5
3 4 5 6
4 5 6 7
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ |

```

Q.2 WAP to print 1 2 3

a b c

1 2 3

a b c

```

#include<stdio.h>

void main()
{
    for(int i=1;i<=4;i++)
    {
        int x=1;
        char ch='a';
        for(int j=1;j<=4;j++)
        {
            if(i%2==0)
            {
                printf("%c ",ch);
                ch++;
            }
            if(i%2!=0)
            {
                printf("%d ",x);
                x++;
            }
        }
        printf("\n");
    }
}

```

Output:

```
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques2.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques2.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
1 2 3 4
a b c d
1 2 3 4
a b c d
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ |
```

Q.3. WAP to print 1 1 1 1

2 2 2 2

3 3 3 3

4 4 4 4

```
#include<stdio.h>
void main()
{
    for(int i=1;i<=4;i++)
    {
        for(int j=1;j<=4;j++)
        {
            printf("%d ",i);
        }
        printf("\n");
    }
}
```

Output:

```
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques3.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques3.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
1 1 1 1
2 2 2 2
3 3 3 3
4 4 4 4
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ |
```

Q.4. WAP to print A B C

D E F

G H I

```
#include<stdio.h>
void main()
{
    char ch = 'A';
    for(int i=1;i<=3;i++)
    {
        for(int j=1;j<=3;j++)
        {
            printf("%c ",ch);
            ch++;
        }
        printf("\n");
    }
}
```

Output:

```
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques4.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques4.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
A B C
D E F
G H I
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ |
```

Q.5. WAP to print A B C D

B C D E

C D E F

D E F G

```

#include<stdio.h>
void main()
{
    char ch='A';
    char org;
    for(int i=1;i<=4;i++)
    {
        org=ch;
        for(int j=1;j<=4;j++)
        {
            printf("%c ",ch);
            ch++;
        }
        printf("\n");
        ch=org+1;
    }
}

```

Output:

```

aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques5.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques5.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
A B C D
B C D E
C D E F
D E F G
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$

```

Q.6. WAP to print /* \$ = \$ =

\$ = \$ =

\$ = \$ =

\$ = \$ = */

```

#include<stdio.h>
void main()
{
    char ch1 = '$';
    char ch2 = '=';

    for(int i=1;i<=4;i++)
    {
        char ch1 = '$';
        char ch2 = '=';
        for(int j=1;j<=4;j++)
        {
            if(j%2==0)
            {
                printf("%c ",ch2);
            }
            if(j%2!=0)
            {
                printf("%c ",ch1);
            }
        }
        printf("\n");
    }
}

```

Output:

```

aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques6.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques6.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
$ = $ =
$ = $ =
$ = $ =
$ = $ =
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ |

```

Q.7. WAP to print /* 1 2 9 4

25 6 49 8

81 10 121 12

169 14 225 16 */

```

#include<stdio.h>

void main()
{
    int num=1;
    for(int i=1;i<=4;i++)
    {
        for(int j=1;j<=4;j++)
        {
            if(j%2==0)
            {
                printf("%4d ",num);
            }
            if(j%2!=0)
            {
                printf("%4d| ",num*num);
            }
            num++;
        }
        printf("\n");
    }
}

```

Output:

```

aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques7.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques7.c
^[[Aaditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
 1 42    9 44
25 46   49 48
81 410 121 412
169 414 225 416
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ |

```

Q.8. WAP to print /* 1 3 5

7 9 11

13 15 17 */

```

#include<stdio.h>

void main()
{
    int num=1;
    for(int i=1;i<=3;i++)
    {
        for(int j=1;j<=3;j++)
        {
            printf("%2d  ",num);
            num=num+2;
        }
        printf("\n");
    }
}

```

Output:

```

aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques8.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques8.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
 1  3  5
 7  9 11
13 15 17
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ |

```

Q.9. WAP to print /* 2 5 10

17 26 37

50 65 82 */


```

#include<stdio.h>
void main()
{
    int gap=1;
    int num=1;
    for(int i=1;i<=3;i++)
    {
        for(int j=1;j<=3;j++)
        {
            num=num+gap;
            printf("%2d ",num);
            gap=gap+2;
        }
        printf("\n");
    }
}

```

Output:

```

50 65 82
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques9.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques9.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
 2  5 10
17 26 37
50 65 82
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ |

```

Q.10. WAP to print /* D4 C3 B2 A1

D4 C3 B2 A1

D4 C3 B2 A1

D4 C3 B2 A1 */

```

#include<stdio.h>

void main()
{
    for(int i=1;i<=4;i++)
    {
        char ch='D';
        int x=4;
        for(int j=1;j<=4;j++)
        {
            printf("%c%d ",ch,x);
            ch--;
            x--;
        }
        printf("\n");
    }
}
~

```

Output:

```

aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques9.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ vim ques10.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ cc ques10.c
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ ./a.out
D4 C3 B2 A1
D4 C3 B2 A1
D4 C3 B2 A1
D4 C3 B2 A1
aditi@DESKTOP-ANL3TOH:/mnt/d/Core2Web/assignment6Pattern$ |

```