CSE 115L: Programming Language I Lab (Section: 06)

Spring 2020

Lab Week-06 (Nested Loop)

Example 1: Using for loop

```
#include <stdio.h>

int main(void)
{
	int i, j;

	for(i=1; i<=2; i++)
	{
	printf("%d. Outer Loop\n", i);

	for(j=1; j<=3; j++)
	{
	printf("%d.%d. Inner Loop\n", i,j);
	}
	printf("\n");
	}
	return 0;
}
```

Example 2: Using while loop

```
#include <stdio.h>

int main(void)
{
	int i=1, j;

	while(i <= 2)
	{
	j = 1;
	printf("%d. Outer Loop\n", i);

	while(j <= 3)
	{
	printf("%d.%d. Inner Loop\n", i,j);
	j++;
	}

	printf("\n");
	i++;
	}
	return 0;
}
```

Example 3: Using do while loop

```
#include <stdio.h>

int main(void)
{
	int i=1, j;

	do
	{
	j = 1;
	printf("%d. Outer Loop\n", i);
```

```
        do
        {
        printf("%d.%d. Inner Loop\n", i,j);
        j++;
        }while(j <= 3);

        printf("\n");
        i++;
        }while(i <= 2);


        return 0;
}
```

Example 4: rectangle pattern with number	Example 5: triangle pattern with number

#include <stdio.h>
 	
int main(void)
{
int i = 0, j= 0, row = 5, column = 3;
 	
while(i<row)
{
j = 0;
while(j<column)
{
printf("%d ", j+1);
j++;
}
printf("\n");
i++;
}
}
	#include <stdio.h>
	
	int main(void)
	{
	int i = 0, j= 0, count = 5;
	
	while(i<count)
	{
	j = 0;
	while(j<=i)
	{
	printf("%d ", j+1);
	j++;
	}
	printf("\n");
	i++;
	}
	}

Example 6: triangle pattern

```
*
**
***
****
*****
```

```
#include <stdio.h>

int main(void)
{
        int i = 0, j= 0, count = 5;

        while(i<count)
        {
        j = 0;
        while(j<=i)
        {
        printf("*");
        j++;
        }
        printf("\n");
        i++;
        }
}
```

Example 7: reversed triangle pattern

```
    *
   **
  ***
 ****
*****
```

```
#include <stdio.h>

int main(void)
{
        int i, j;
        int count = 5;

        for(i=0; i<count; i++)
        {
        for(j=count-1; j>i; j--)
        {
        printf(" ");
        }

        for(j=0; j<=i; j++)
        {
        printf("*");
        }
        printf("\n");
        }
        return 0;
}
```

Example 8: pyramid pattern

```
#include <stdio.h>

int main(void)
{
	int i, j;
	int count = 5;

	for(i=0; i<count; i++)
	{
	for(j=count-1; j>i; j--)
	{
	printf(" ");
	}

	for(j=0; j<=i; j++)
	{
	printf("* ");
	}
	printf("\n");
	}
	return 0;
}
```