Pattern Printing Questions and Solutions in C

Pattern 1 - Number Pattern

Pattern:

```
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
```

Solution Code:

```c
#include <stdio.h>
int main() {
    int num = 1;
    for(int i = 0; i < 4; i++) {
        for(int j = 0; j < 4; j++) {
            printf("%d ", num++);
        }
        printf("\n");
    }
    return 0;
}
```

Pattern 2 - Alphabet Pattern

Pattern:

```
A B C D
E F G H
I J K L
M N O P
```

Solution Code:

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

```c
int main() {

    char ch = 'A';

    for(int i = 0; i < 4; i++) {

        for(int j = 0; j < 4; j++) {

            printf("%c ", ch++);

        }

        printf("\n");

    }

    return 0;

}
```

Pattern 3 - Square of Asterisks

Pattern:

```
****

****

****

****
```

Solution Code:

```c
#include <stdio.h>

int main() {

    for(int i = 0; i < 4; i++) {

        for(int j = 0; j < 4; j++) {

            printf("*");

        }

        printf("\n");

    }

    return 0;

}
```

Pattern 4 - Hollow Square of Asterisks

Pattern:

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

Solution Code:

```c
#include <stdio.h>
int main() {
    for(int i = 0; i < 4; i++) {
        for(int j = 0; j < 4; j++) {
            if(i == 0 || i == 3 || j == 0 || j == 3)
                printf("*");
            else
                printf(" ");
        }
        printf("\n");
    }
    return 0;
}
```

Pattern 5 - Right Triangle of Asterisks

Pattern:

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

Solution Code:

```c
#include <stdio.h>
int main() {
    for(int i = 1; i <= 4; i++) {
        for(int j = 1; j <= i; j++) {
            printf("* ");
```

```
        }

        printf("\n");

    }

    return 0;

}
```

Pattern 6 - Triangle of Numbers

```
Pattern:


1

2 3

4 5 6

7 8 9 10
```

```
Solution Code:


#include <stdio.h>

int main() {

    int num = 1;

    for(int i = 1; i <= 4; i++) {

        for(int j = 1; j <= i; j++) {

            printf("%d ", num++);

        }

        printf("\n");

    }

    return 0;

}
```

Pattern 7 - Triangle of Alphabets

```
Pattern:


a

b c

d e f

g h i j
```

Solution Code:

```c
#include <stdio.h>
int main() {
    char ch = 'a';
    for(int i = 1; i <= 4; i++) {
        for(int j = 1; j <= i; j++) {
            printf("%c ", ch++);
        }
        printf("\n");
    }
    return 0;
}
```

Pattern 8 - Repeated Numbers (1 to 3)

Pattern:

```
1 2 3
1 2 3
1 2 3
```

Solution Code:

```c
#include <stdio.h>
int main() {
    for(int i = 0; i < 3; i++) {
        for(int j = 1; j <= 3; j++) {
            printf("%d ", j);
        }
        printf("\n");
    }
    return 0;
}
```

Pattern 9 - Repeated Alphabets (A to C)

```
Pattern:


A B C

A B C

A B C
```

Solution Code:

```c
#include <stdio.h>

int main() {

    for(int i = 0; i < 3; i++) {

        for(int j = 0; j < 3; j++) {

            printf("%c ", 'A' + j);

        }

        printf("\n");

    }

    return 0;

}
```

Pattern 10 - Column Repeated Numbers

```
Pattern:


1 1 1

2 2 2

3 3 3
```

Solution Code:

```c
#include <stdio.h>

int main() {

    for(int i = 1; i <= 3; i++) {

        for(int j = 1; j <= 3; j++) {

            printf("%d ", i);

        }

        printf("\n");

    }
```

```
    return 0;
}
```

Pattern 11 - Column Repeated Alphabets

Pattern:

```
A A A
B B B
C C C
```

Solution Code:

```
#include <stdio.h>
int main() {
    for(int i = 0; i < 3; i++) {
        for(int j = 0; j < 3; j++) {
            printf("%c ", 'A' + i);
        }
        printf("\n");
    }
    return 0;
}
```

Pattern 12 - Pyramid of Asterisks

Pattern:

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

Solution Code:

```
#include <stdio.h>
int main() {
    int n = 4;
```

```c
    for(int i = 1; i <= n; i++) {

        for(int j = i; j < n; j++) {

            printf(" ");

        }

        for(int k = 1; k <= (2 * i - 1); k++) {

            printf("*");

        }

        printf("\n");

    }

    return 0;

}
```