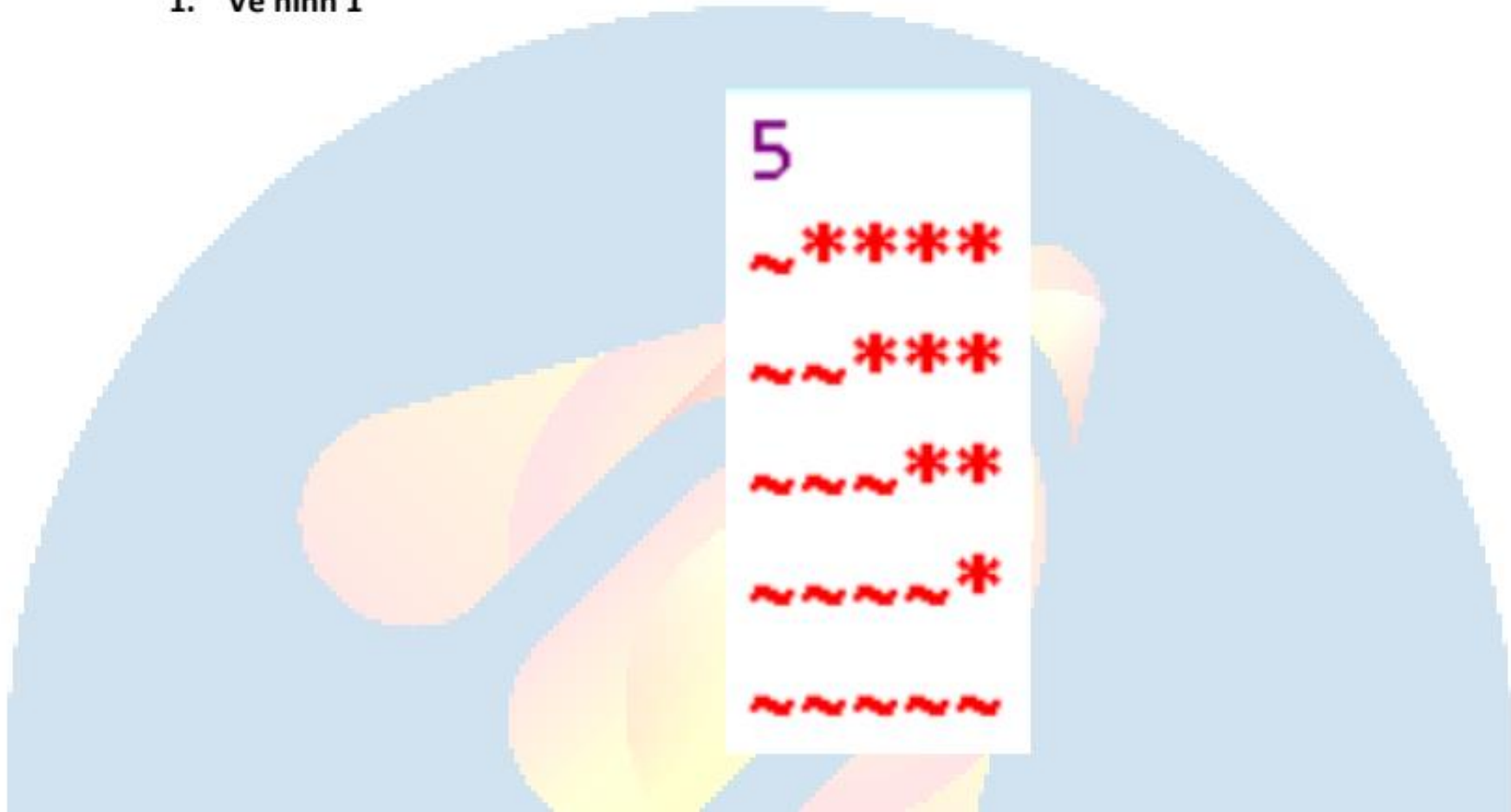


## I. If else nâng cao (không tách hình)

### 1. Vẽ hình 1



```
int main(){  
    int n;  
    scanf("%d",&n);  
    for(int i=1;i<=n;++i){  
        for(int j=1;j<=n;++j){  
            if(j<=i) printf("~");  
            else printf("*");  
        }  
        printf("\n");  
    }  
}
```

## 2. Vẽ hình 2

8

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```
int main(){
    int n;
    scanf("%d",&n);
    for(int i=1;i<=n;++i){
        for(int j=1;j<=n;++j){
            if(j<=i){
                if(j==1||j==i||i==n)
                    printf("*");
                else printf(".");
            }
            else printf("~");
        }
        printf("\n");
    }
}
```

### 3. Vẽ hình 3

6

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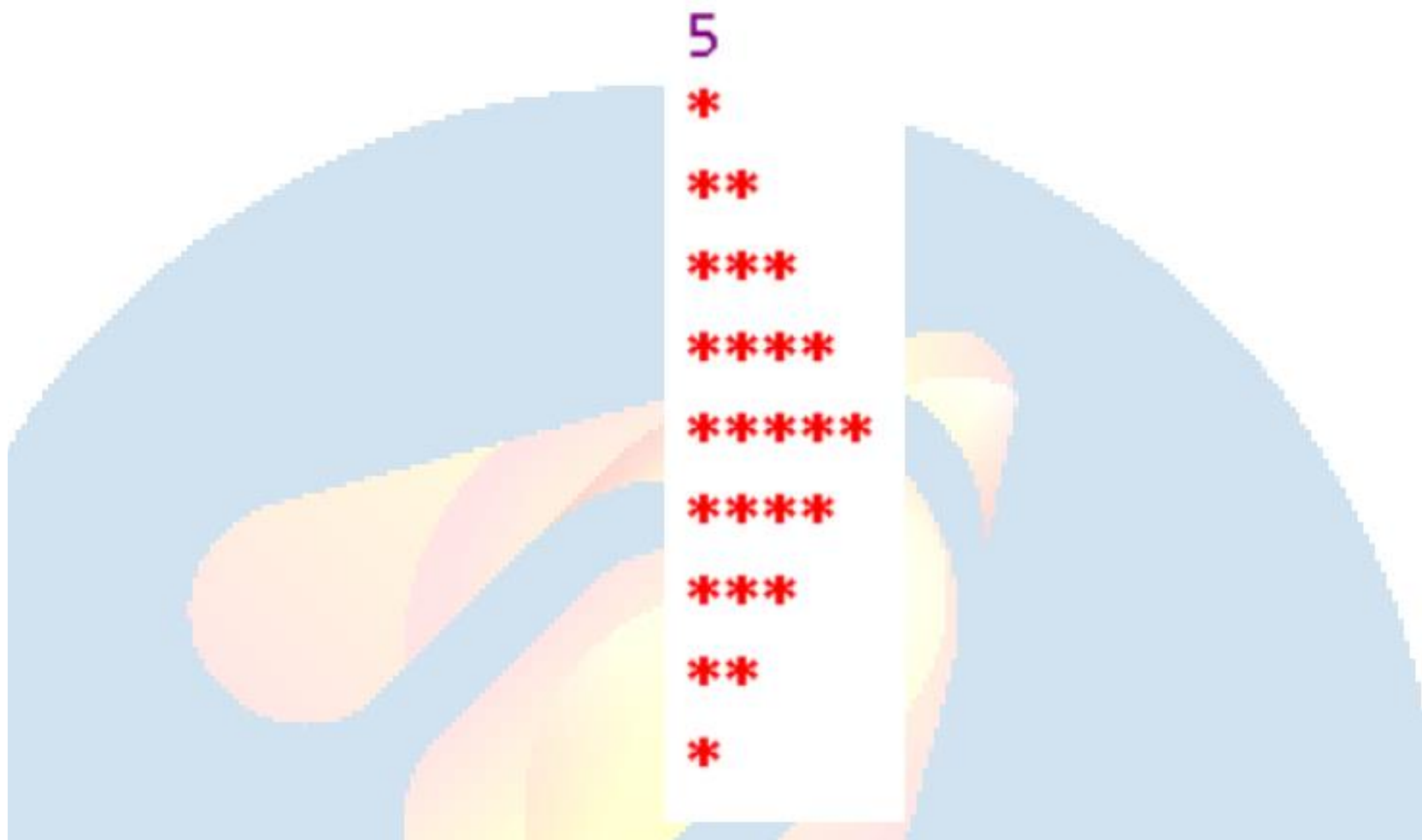
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```
int main(){
    int n;
    scanf("%d",&n);
    for(int i=n;i>=1;--i){
        for(int j=1;j<2*n;++j){
            if(j>i&& j<2*n-i) printf("~");
            else printf("*");
        }
        printf("\n");
    }
}
```

4. Vẽ hình 4 (Bài 6.05)



```
int main(){
    int n;
    scanf("%d",&n);
    int d = 1;
    for(int i=1;i>=1; i+=d){
        for(int j=1;j<=i;++j)
            printf("*");
        printf("\n");
        if (i==n) d=-1;
    }
}
```



## 5. Ví dụ 5

6

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```
int main(){
    int n;
    scanf("%d",&n);
    int d = -1;
    for(int i=n;i<=n; i+=d){
        for(int j=1;j<=i;++j)
            printf("*");
        printf("\n");
        if (i==1) d=1;
    }
}
```

6. Vẽ hình 6 (Bài 6.20)

6

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\*\*\*\*\*~\*\*  
\*\*\*\*\*~\*\*\*  
\*\*\*~\*\*\*\*  
\*\*~\*\*\*\*\*  
\*~\*\*\*\*\*  
\*\*~\*\*\*\*\*  
\*\*\*~\*\*\*\*  
\*\*\*\*\*~\*\*  
\*\*\*\*\*~\*\*\*  
\*\*\*\*\*

```
int main(){
    int n;
    scanf("%d",&n);
    int d = -1;
    for(int i=n;i<=n; i+=d){
        for(int j=1;j<=2*n;++j){
            if(j>i&& j<=2*n-i) printf("~");
            else printf("*");
        }
        printf("\n");
        if (i==1) d=1;
    }
}
```

## II. Vẽ hình liên quan đến số

### 1. Số tăng dần (Bài 6.09)

5

1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

16 17 18 19 20

21 22 23 24 25

C1:

```
int main(){  
    int n, d=1;  
    scanf("%d",&n);  
    for(int i=1;i<=n;++i){  
        for(int j=1;j<=n;++j)  
            printf("%d ",d++);  
        printf("\n");  
    }  
}
```

C2:

# FULL HOUSE

```
int main(){
    int n;
    scanf("%d",&n);
    for(int i=0;i<n;++i){
        for(int j=1;j<=n;++j)
            printf("%d ",i*n+j);
        printf("\n");
    }
}
```

## 2. Số tăng dần 2

4

1 2 3 4

2 3 4 5

3 4 5 6

4 5 6 7



```
int main(){  
    int n;  
    scanf("%d",&n);  
    for(int i=1;i<=n;++i){  
        for(int j=i;j<i+n;++j)  
            printf("%d ",j);  
        printf("\n");  
    }  
}
```

### 3. Hình vẽ số 3 (Bài 7.08)

5

1	2	3	4	5
2	1	2	3	4
3	2	1	2	3
4	3	2	1	2
5	4	3	2	1

```
int main(){
    int n;
    scanf("%d",&n);
    for(int i=1;i<=n;++i){
        for(int j=i;j>1;--j)
            printf("%d ",j);
        for(int j=1;j<=n-i+1;++j)
            printf("%d ",j);
        printf("\n");
    }
}
```

#### 4. Hình vẽ số 4 (Bài 7.16)

5

~~~~1

~~~131

~~13531

~1357531

135797531

5

~~~~1

~~~131

~~13531

~1357531

135797531

~~~~~

~~~~

~~~

~~

1

13

135

1357

13579

1

31

531

7531

```
int main(){
    int n;
    scanf("%d",&n);
    for(int i=1;i<=n;++i){
        for(int j=1;j<=n-i;++j)
            printf("~");
        for(int j=1;j<=i;++j)
            printf("%d",2*j-1);
        for(int j=i-1;j>=1;--j)
            printf("%d",2*j-1);
        printf("\n");
    }
}
```

5. Hình vẽ số quy luật nâng cao 1 (Bài 7.14)

5

1

2 4

7 11 16

22 29 37 46

56 67 79 92 106

```
int main(){
    int n, tmp=1, d=1;
    scanf("%d",&n);
    for(int i=1;i<=n;++i){
        for(int j=1;j<=i;++j){
            printf("%d ",tmp);
            tmp += d++;
        }
        printf("\n");
    }
}
```



6. Hình vẽ số quy luật nâng cao 2 (Bài 7.11)

5

1

2 6

3 7 10

4 8 11 13

5 9 12 14 15

```
int main(){
    int n, tmp;
    scanf("%d",&n);
    for(int i=1;i<=n;++i){
        tmp=i;
        for(int j=0;j<i;++j){
            printf("%d ",tmp);
            tmp += n-j - 1;
        }
        printf("\n");
    }
}
```