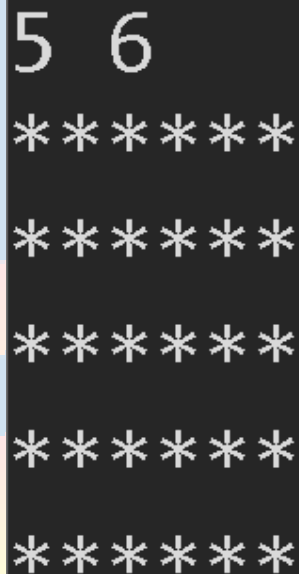


## BUỔI 6 – FULL HOUSE

### I. Làm quen 2 vòng lặp lồng nhau

#### 1. Vẽ hình chữ nhật bằng \* với kích thước n\*m



```
5 6
*****
*****
*****
*****
*****
```

```
3 int main(){
4     int n, m;
5     scanf("%d%d",&n,&m);
6     for(int i=1;i<=n;++i){
7         for(int j=1;j<=m;++j){
8             printf("*");
9         }
10        printf("\n");
11    }
12 }
```

## 2. Vẽ tam giác bằng \* (bai 6.16)

```
5
*
**
***
****
*****
```

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

### 3. Vẽ tam giác ngược

```
5
*****
****
***
**
*
```

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

## II. Vòng lặp lồng nhau kết hợp if else.

### 1. Chữ nhật rỗng



```
5 7
*****
*       *
*   .   *
*   .   *
*   .   *
*****
```

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


## 2. Tam giác rỗng (Bai 6.12)



```
7
*
**
*  *
* . *
* . . *
* . . . *
* . . . . *
*****
```

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

### 3. Tam giác ngược **rỗng** (Bài 6.04)

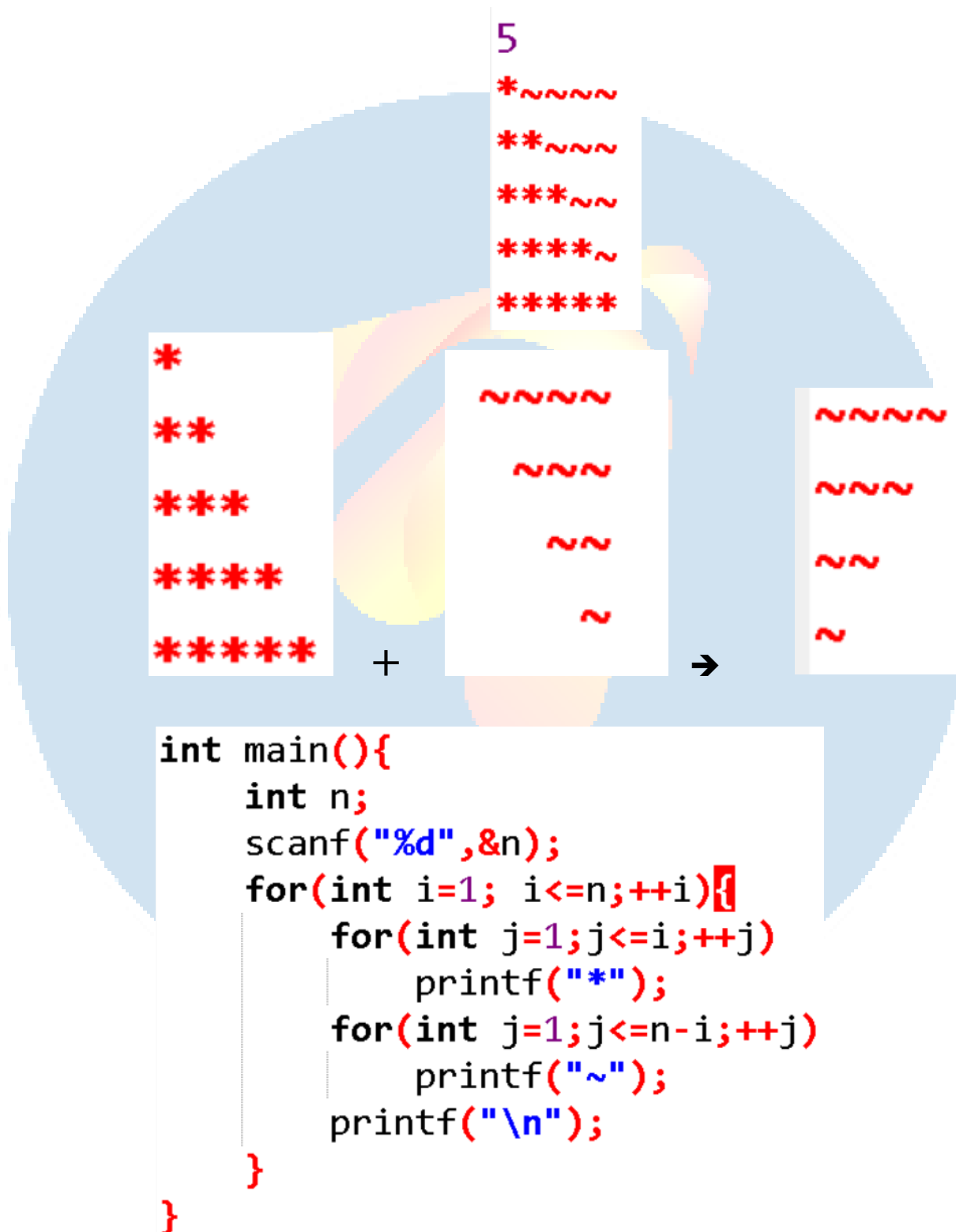


```
8
*****
*       *
*     .   .   .   .   *
*   .   .   .   .   *
* .   .   .   *
* .   .   *
* .   *
* *
*
```

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

### III. Tách hình

#### 1. Vẽ hình 1



5

```

~~~~~*
~~~**
~~*.*
~*.*.*
*****
  
```

```

~~~~~
~~~
~~
~
  
```

```

          *
        **
      ***
     *.*
    *.*.*
   *****
  
```

```

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 k=1;k<=i;k++)
            printf("*");
        printf("\n");
    }
}
  
```

```

        for(int j=1;j<=i;++j)
            if(i==1||i==n||j==1||j==i)
                printf("*");
            else printf(".");
        printf("\n");
    }
}

```



### 3. Vẽ hình 3 (Bài 6.05)

```
5
*
**
***
****
*****
*****
*****
*****
****
***
**
*
```

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

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

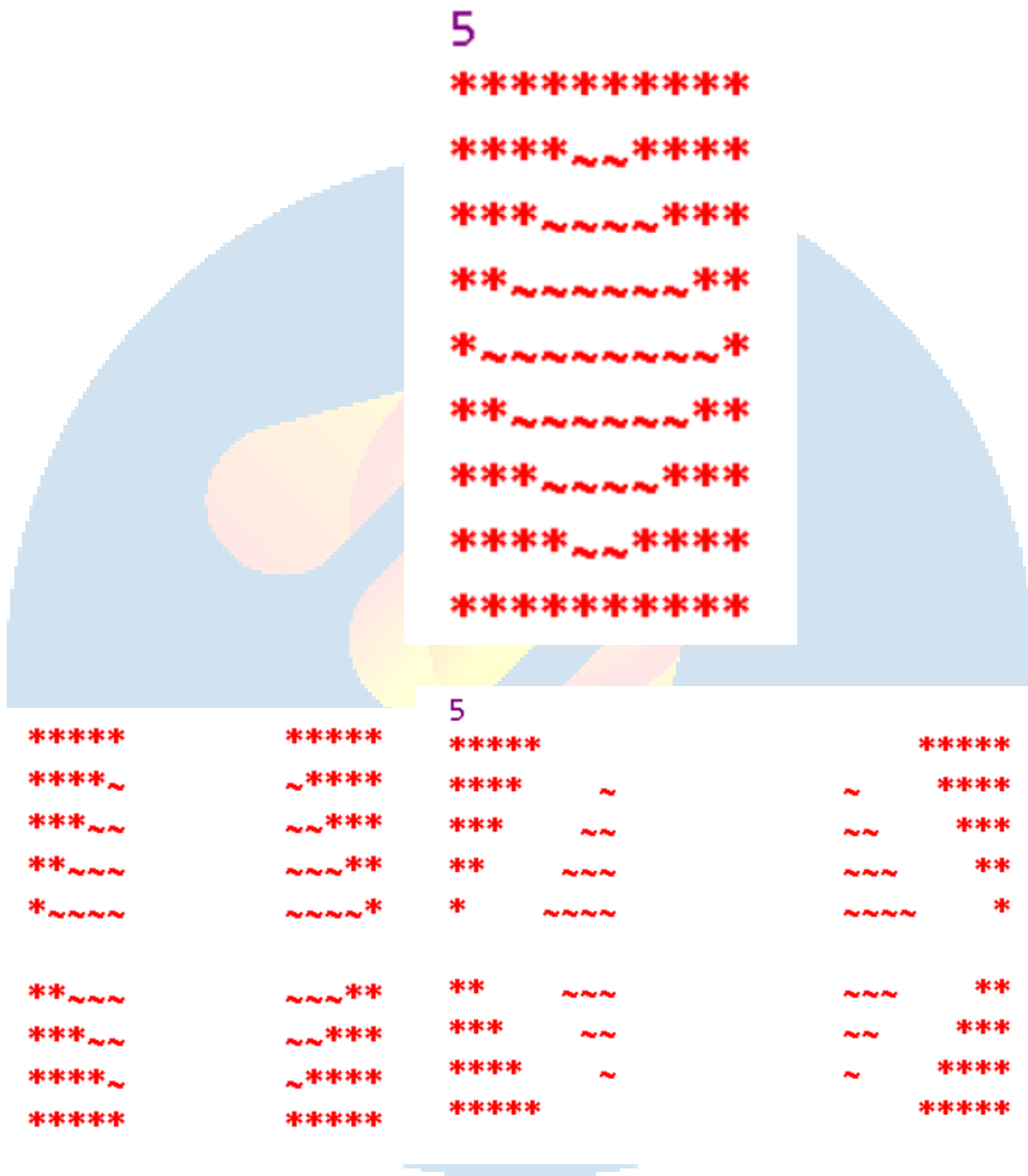
#### 4. Vẽ hình 4

```
5
~~~~*****
~~~*****
~~~*****
~~*****
~**
*
~**
~~***
~~~****
~~~~*****
```

```
~~~~*****
~~~*****
~~~*****
~~*****
~**
*
~**
~~***
~~~****
~~~~*****
```

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

### 5. Vẽ hình 5 (*Bai 6.20*)



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