If…Then…Else… Statement:

Question 1:

$$\text{intRate} = \begin{cases} 0.08 & \text{when loanSize} < 1000 \\ 0.10 & \text{when } 1000 <= \text{loanSize} < 2000 \\ 0.11 & \text{when loanSize} >= 2000 \end{cases}$$

What is `intRate`, if `loanSize` = 2000?

(See Module `C_Branching`, sub procedures `if_test1`, `if_test3`, `if_test4`)

Practice: Write a sub named `exercise`

`intRate` = 0.08, `loanLife` = “10 years” when `loanSize` < 1000

`intRate` = 0.10, `loanLife` = “20 years” when `loanSize` >= 1000

When `loanSize` = 2000, display in message box

“Interest rate is 0.1 and life of the loan is 20 years”

(red part should be `intRate` and `loanLife` values)

GoTo statement:

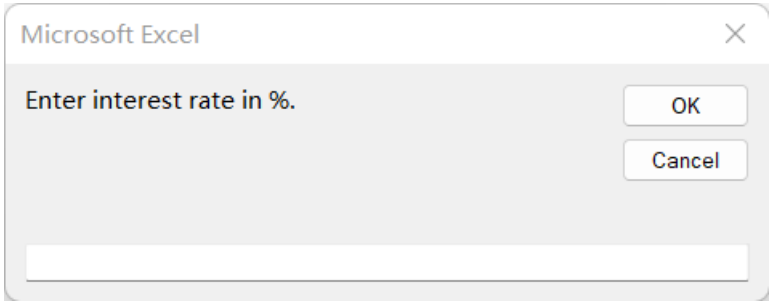
Write a Sub `if_prac` that calculates interest expense based on the value of interest rate.

Two variables to define:

`intRate` is the interest rate (in percentage) with `Single` data type.

`intExp` is the interest expense with `Single` data type.

Use input box to enter value of `intRate`



When `intRate` > 15, display an error message:

"Interest rate cannot be greater than 15."

When `intRate` <= 15, `intExp` = 100000 * `intRate` / 100. And display "`intExp`" value in a message box.

Select Case…Case…End Select Statement:

Question 1:

Enter “Quantity” using input box with message:

“Enter Quantity: ”.

$$\text{Discount } = \begin{cases} 0.1 & \text{when Quantity} = 0, \dots, 24 \\ 0.15 & \text{when Quantity} = 25, \dots, 49 \\ 0.2 & \text{when Quantity} = 50, \dots, 74 \\ 0.25 & \text{when Quantity} \geq 75 \end{cases}$$

If there’s no entry in the input box, get exit the sub.

Display results “Discount: ***”.

Question 2:

If the computer's system date is 1 or 7, display message:

"This is the weekend"

Otherwise, display message:

"This is not weekend"

MsgBox and InputBox functions

(See Module "D_MsgInputBox")

Three variables in the calculation: `loanAmount`, `intRate`, `intExpense`

Model 1:

```
loanAmount = 100000
intRate = 0.05
```

Ask the user in a message box:

"Do you want to increase the interest rate of (`intRate` * 100)% by 1%?"

If user chooses "Yes", then `intRate` is increased by 1%, and

```
intExpense = loanAmount * intRate.
```

If user chooses "No", then `intRate` doesn't change, and

```
intExpense = loanAmount * intRate.
```

Display the result: "Interest expense is $(intExpense)".

Model 2:

`loanAmount = 100000`

Ask user to enter the `IntRate` in an input box:

"Enter interest rate in %."

If user clicks "Cancel" or "Exit" button, then sub procedure is terminated.

If user clicks "Yes" button, then use message box to confirm: "The interest rate you entered is (`intRate`)%. Is this OK?"

If user clicks "No" button, then sub procedure is terminated.

If user clicks "Yes" button, then calculation is continued:

```
intExpense = loanAmount * intRate / 100.
```

Display the result: "Interest expense is $(`intExpense`)".

For…Next, Do…Loop: Module `E_Looping`, sub `ForNext`.

A saving plan.

First month saving = 1.

Monthly saving increases by 3 every month (`mnthlyIncrease` = 3).

Today, initial total saving is 0.

Saving target is 1000.

How many months does it take to achieve the saving goal (1000)?

Month (`mnthNum`)	0	1	2	3	…	?
Monthly Saving (`mnthlySav`)		1	1+3=4	4+3=7	…	
Total Saving (`totSav`)	0	0+1=1	1+4=5	5+7=12	…	Target is 1000

Variable Name Convention:

Inputs (also called "parameters"):

`mnthlyIncrease = 3`

`savTarget = 1000`

Variables in calculation:

`mnthNum` ← linearly increasing, "counter" in For loop

`mnthlySav` = `mnthlySav` (prev. month) + `mnthlyIncrease`

`totSav` = `totSav`(prev. month) + `mnthlySav`(this month)