Visual-based Programming (GUI)
# Flowchart

Flowcharts use special shapes to represent different types of actions or steps in a process. Lines and arrows show the sequence of the steps, and the relationships among them. These are known as flowchart symbols.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oval</td>
<td>Start/End</td>
<td>An oval represents a start or end point</td>
</tr>
<tr>
<td>Arrow</td>
<td>Arrows</td>
<td>A line is a connector that shows relationships between the representative shapes</td>
</tr>
<tr>
<td>Parallelogram</td>
<td>Input/Output</td>
<td>A parallelogram represents input or output</td>
</tr>
<tr>
<td>Rectangle</td>
<td>Process</td>
<td>A rectangle represents a process</td>
</tr>
<tr>
<td>Diamond</td>
<td>Decision</td>
<td>A diamond indicates a decision</td>
</tr>
</tbody>
</table>
Flowchart Symbol

Start/End Symbol

The **terminator symbol** marks the **starting** or **ending point** of the system. It usually contains the word "Start" or "End."
Flowchart Symbol

Input / Output Symbol

Represents material or information entering or leaving the system, such as customer order (input) or a product (output).
Flowchart Symbol

A **box** can represent a single step ("add two cups of flour"), or an entire **sub-process** ("make bread") within a **larger process**.
A decision or branching point. Lines representing different decisions emerge from different points of the diamond.
A printed document or report.
Flowchart Symbol

Multiple Documents Symbol

Represents **multiple** documents in the process.
Flowchart Symbol

Represented a step where a user is prompted to enter information manually.
Flowchart Symbol

Preparation Symbol

Represents a set-up to another step in the process.
Flowchart Symbol

Connector Symbol

Indicates that the flow continues where a matching symbol (containing the same letter) has been placed.
Flowchart Symbol

Indicates a sequence of actions that perform a specific task embedded within a larger process. This sequence of actions could be described in more detail on a separate flowchart.
Flowchart Symbol

Indicates a list of information with a standard structure that allows for searching and sorting.
Indicates that the process continues off page.
**Flowchart Example 1**

**High School Admission**

**Problem:**
Create a flowchart to accept subject scores and compute the total scores by multiplying score and number of subjects. If the computed total score is more than 800, the student will be accepted to study in high school otherwise will not be accepted.
Flowchart Example 2
Test the Temperature

Problem:
Make a flowchart that accepts temperature reading. If the temperature is below 32 degree Celsius display “Above Freezing” message if not “Below Freezing” message.
Flowchart Example
Credit Card Order Process

1. Order placed with credit card selected as payment method.
2. Transaction started in order system.
3. Validate through System.
   - Verified by Visa
   - IT
4. Credit card valid?
   - Yes:
     - Funds Available?
       - Yes:
         - Transaction completed in order system
         - Customer sent receipt via e-mail
       - No:
         - Customer must enter new payment method
   - No:
     - Customer must enter new payment method
5. Customer information database
6. Transaction entered in ledger
7. Entries are reconciled at end of month
   - Bob
   - Accounts Receivable

CHONKANYANUKOON SCHOOL ENGLISH PROGRAM
COMPUTER SUBJECT (COMPUTER APPLICATIONS 3)
Flowchart Example

Purchasing & Procurement Process

CHONKANYANUKOON SCHOOL ENGLISH PROGRAM
COMPUTER SUBJECT (COMPUTER APPLICATIONS 3)
**Flowchart Example**

**Shipping Process**

1. Go to Portal and go to 'Open Order'.
2. Check all batches for fraudulent or duplicate orders.
3. Print Summary Order, batch detail, press 'Post Batch'.
5. Open UPS World Ship.
7. Pack all media into envelopes.
8. Stamp all international media, place all media in UPS bags.
9. Close all UPS mail bags and keep them.
10. UPS World Ship input: Cost ID and press the Tab key.
11. Enter the bag weight and process the label.
12. Enter tracking # from "EDR" to Closed Entries.
13. Go to FedEx.com print the labels.
14. Weigh bags and fill out the control form.
Conditional Select Case Statement

Select Case statements are just like If Else Statements but have some differences: they only evaluate one thing and are more readable.

**Syntax:**

Select Case Expression
Case Value1
    Program_Statement
Case Value2
    Program_Statement
Case Else
    Program_Statement
End Select
Conditional Select Case Statement

Letter Character Select Case Structure

Example 1:

Figure 1: Letter Character Select Case Program
Conditional Select Case Statement
Letter Character Select Case Structure

Example 1:
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
    Dim input1 As Char
    input1 = TextBox1.Text
    Select Case input1
        Case "A"
            Label5.Text = "You have chosen Elementary Level."
            Label6.Text = "This is grade 1 to 6 program."
        Case "B"
            Label5.Text = "You have chosen Secondary Level."
            Label6.Text = "This is grade 7 to 12 program."
        Case "C"
            Label5.Text = "You have chosen Tertiary Level."
            Label6.Text = "This is grade 13 to 16 program."
        Case Else
            Label5.Text = "Sorry, Invalid Choice! Try again."
            Label6.Text = "Please check your input."
    End Select
End Sub
Conditional Select Case Statement

Number Character Select Case Structure

Example 2:

Figure 2: Number Character Select Case Program
Conditional Select Case Statement

Number Character Select Case Structure

Example 2:

Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
    Dim input2 As Integer

    input2 = TextBox2.Text

    Select Case input2
        Case 1
            Me.Hide()
            Form2.Show()
        Case 2
            Me.Hide()
            Form3.Show()
        Case Else
            Me.Hide()
            Form4.Show()
    End Select
End Sub
Conditional Select Case Statement
Multiple Character Select Case Structure

Example 3:

Figure 1: Multiple Character Select Case Program
Conditional Select Case Statement

Multiple Character Select Case Structure

Example 3:

Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
    Dim input3 As String
    input3 = TextBox3.Text
    Select Case input3
        Case "Menu 1"
            TextBox4.Text = "50 Baht"
        Case "Menu 2"
            TextBox4.Text = "30 Baht"
        Case "Menu 3"
            TextBox4.Text = "70 Baht"
        Case Else
            TextBox4.Text = "Wrong."
    End Select
End Sub
REFERENCES:

**Book**

**Websites**


**Images**