

**Mr. Giansante**



# **Visual Basic**

**Hang Man**

**August 2016**

# Hang Man

## Difficulty Level:

Beginner  
Intermediate  
Advanced

## Help References:

Button Control  
MenuStrip Control  
Random Numbers  
Arrays

## Hangman Help

Enter your puzzles in an array (of strings)

```
puzzles(1) = "The Empire Strikes Back"  
puzzles(2) = "Casablanca"  
puzzles(3) = "This is Spinal Tap"
```

Write a subprogram so that whenever you click on a Button control, a random puzzle will be displayed in a Label.

Write a subprogram that will take all the letters in the selected puzzle and replace them with dashes (-). Characters that are not letters (ie. numbers, apostrophe's) should not be converted to dashes.

**Example.** The Empire Strikes Back

becomes ...

-----

**Example.** Who's that Girl?

becomes ...

---'-----?

Design a Visual Basic program that simulates a one-player game of Hang Man.

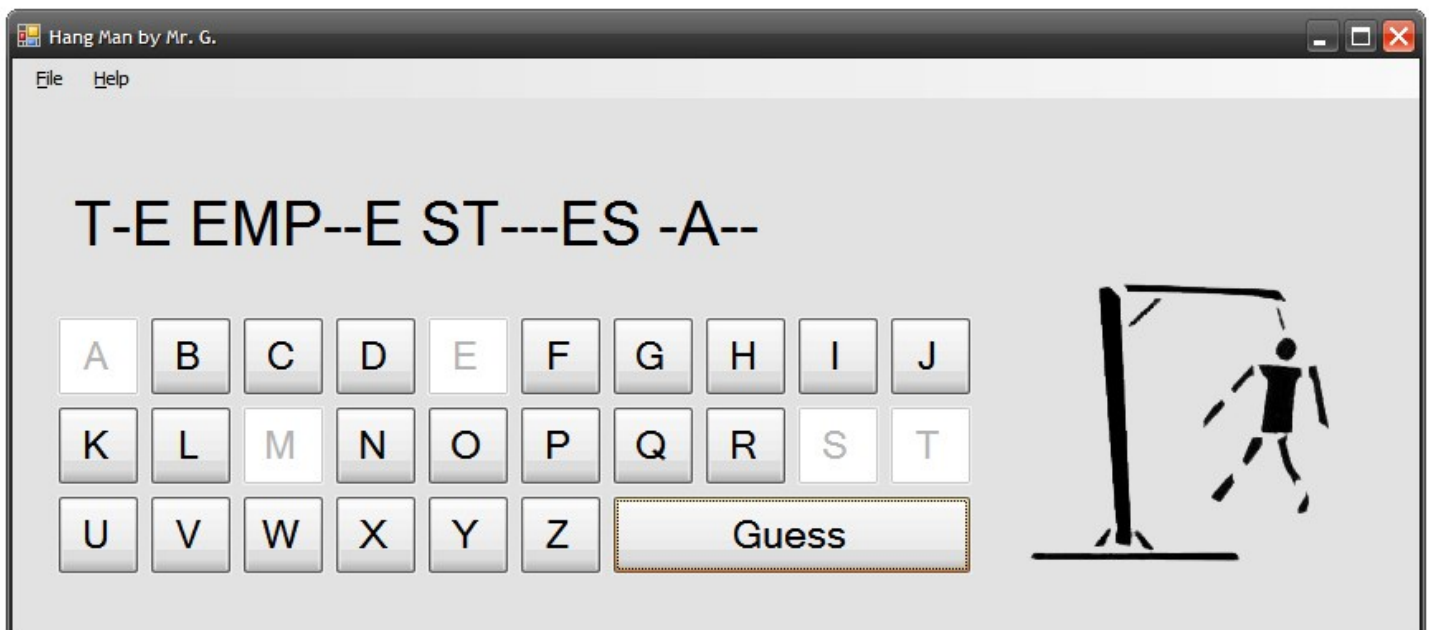
Despite its grim-sounding name, Hang Man is a traditional and enjoyable game.

Playing is simple. You are presented with a picture of a gallow and a string of dashes. The dashes represent the letters of the word (or words) that you have to guess.

You must guess one letter at a time. If you choose a letter that is contained within the word, a dash will be replaced with that letter, giving you a better chance of working out the word.

If you guess a letter not within the word, one bodypart will appear on the HangMan on the gallows. Bodyparts usually are (in order that they appear): head, body, left arm, right arm, left leg, right leg.

You must guess the correct word before the hang man is completed.



# Hang Man

Declare the following variables:

```
Dim puzzles(100) As String
Dim currentpuzzle As String
Dim dashes As String
Dim letter As String
Dim searchfor As String
dim r As Random = New Random
```

In Form | Load ...

```
puzzles(1) = "The Empire Strikes Back"
puzzles(2) = "Casablanca"
puzzles(3) = "This is Spinal Tap"
etc.
```

## The "New Game" button

```
'Pick a random puzzle from the 100 available puzzles
currentpuzzle = puzzles(r.next(1, 101))
```

```
dashes = ""
```

```
'Go through the current puzzle character by character.
'If the character is a letter, add a dash to the end of "dashes",
'otherwise, simply add the character itself.
```

```
For i = 0 To currentpuzzle.Length() - 1
```

```
    letter = currentpuzzle.Chars(i)
    letter = letter.ToUpper
```

```
    If letter >= "A" And letter <= "Z" Then
        dashes = dashes + "-"
```

```
    Else
        dashes = dashes + letter
    End If
```

```
Next
```

```
'Display the dashes in a label
Label1.Text = dashes
```

## The Letter Buttons

Your game should have 26 Command Buttons ... one for each letter of the alphabet.

Code for "A" Button (named "AButton")...

```
searchfor = "A"
```

```
searchforletter() ←————— Note: We will write this procedure in the next step.
```

```
'disable the button so the user cannot click it again
AButton.Enabled = False
```

# Hang Man

## searchforletter()

This procedure will be similar to the code in the "New Game" button.

Rather than checking if each character is a letter, you will only check for the letter stored in the variable "searchfor".

```
Dim newdashes As String  
newdashes = ""
```

Go through the current puzzle character by character.

If the character is "searchfor", add it to the end of "newdashes". otherwise add the corresponding character from "dashes" to the end of "newdashes".

Once the process is complete ...

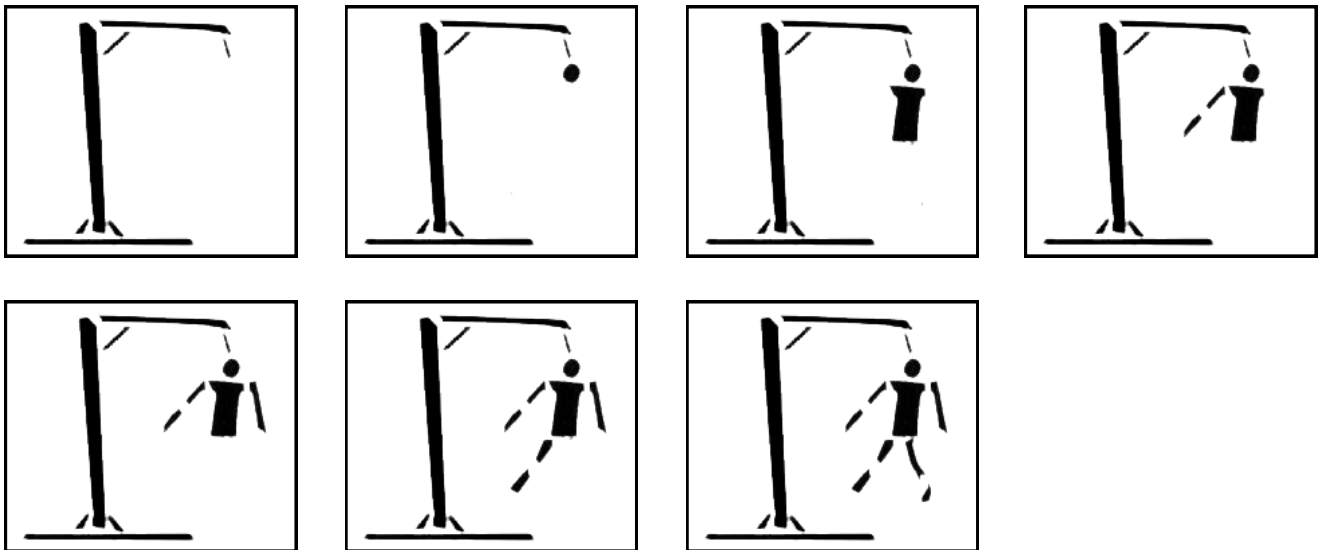
```
dashes = newdashes
```

Display the dashes in the Label control.

Check if dashes = currentpuzzle (if it does, the player has guessed the puzzle).

## Displaying the Hang Man

The simplest way to achieve this is to create seven images, each containing one stage of the Hang Man. Whenever the user guesses a letter that is not in the puzzle, the next image in the sequence is displayed.



# Hang Man

Listed below is a selection of movie names. You can copy these and paste them into your program.

Addams Family Values  
Aladdin  
Alive  
American Beauty  
American Pie  
Anaconda  
Antz  
Arachnophobia  
Armageddon  
Austin Powers: International Man of Mystery  
Batman Returns  
Basketball  
Beavis And Butthead Do America  
Billy Madison  
Black Sheep  
The Blair Witch Project  
Boyz N the Hood  
The Brady Bunch Movie  
Braveheart  
Casino  
Casper  
City of Angels  
City Slickers  
Cliffhanger  
The Commitments  
Con Air  
Days of Thunder  
Deep Impact  
Desperado  
Devil's Advocate  
Dick Tracy  
Dumb and Dumber  
Fight Club  
The Flintstones  
Forrest Gump  
The Fugitive  
Get Shorty  
Ghost  
Godzilla  
Goodfellas  
Good Will Hunting  
Hackers  
Hercules  
Home Alone  
I Know What You Did Last Summer  
Independence Day  
Jurassic Park  
A League of Their Own  
The Lion King  
The Little Mermaid  
The Lost World: Jurassic Park  
A Low Down Dirty Shame  
Magnolia  
The Mask  
The Matrix  
Men in Black  
The Mighty Ducks  
Mission Impossible  
Office Space  
Patriot Games  
Pocahontas  
Pretty Woman  
Pulp Fiction  
Quiz Show  
The Santa Clause  
Schindler's List  
Scream  
Silence of the Lambs  
Six Days Seven Nights  
The Sixth Sense  
The Shawshank Redemption  
Sleepless in Seattle

Space Jam  
Star Wars Episode I: The Phantom Menace  
Teenage Mutant Ninja Turtles  
Terminator 2: Judgment Day  
The Thomas Crown Affair  
The Usual Suspects  
Titanic  
Total Recall  
Toy Story  
True Lies  
  
Twister  
Unforgiven  
What's Eating Gilbert Grape  
A Nightmare On Elm Street  
A View to a Kill  
Against All Odds  
Aliens  
Annie  
Back to the Future  
Batman  
Beetlejuice  
Beverly Hills Cop  
Bill and Ted's Excellent Adventure  
Blade Runner  
Cannonball Run  
Children of a Lesser God  
Coming to America  
Commando  
Crocodile Dundee  
Desperately Seeking Susan  
Die Hard  
E.T. the Extra-Terrestrial  
Fame  
Ferris Bueller's Day Off  
Flashdance  
Full Metal Jacket  
Footloose  
Gandhi  
Ghostbusters  
Gremlins  
Raiders of the Lost Ark  
Indiana Jones and the Temple of Doom  
Indiana Jones and the Last Crusade  
La Bamba  
Lethal Weapon  
Once Upon a Time in America  
Out of Africa  
Pee-wee's Big Adventure  
Platoon  
Pretty in Pink  
Raging Bull  
Revenge of the Nerds  
Risky Business  
Robocop  
Scarface  
Sixteen Candles  
Stand By Me  
The Empire Strikes Back  
Return of the Jedi  
Superman  
The Breakfast Club  
Goonies  
The Karate Kid  
The Woman in Red  
Tootsie  
Tron  
Wargames  
Who Framed Roger Rabbit  
Who's That Girl?

# Hang Man

Please fill out all the information in this column using a pen before getting this assignment marked.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Class

## Academic Honesty

The work I am submitting is completely my own creation and has not been copied from anyone else's work. If I have received help on this project, the names of those who have assisted are listed below.

\_\_\_\_\_  
Signature

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Pre-Marking

The following people have pre-marked this assignment: (minimum of two)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Deductions

Each  which is checked indicates the item was not satisfactory and results in the loss of one mark.

Deduction for late assignment is 1 mark per day.

Deduction for program crashing is 2 marks.

## User Interface

- Appropriate Text in Title Bar (Form.Text)
- Separators and Access Keys in Menu, Capitalization
- "Exit" DialogBox meets requirements
- "About" DialogBox meets requirements
- Efficient and Esthetically-Pleasing User Interface
- Appropriate controls are used
- Spelling and Grammar are correct

## Code / Programming Style

- Variables are declared and logically named
- Code is commented where appropriate
- Code is indented and spaced to show
- Code is efficient

## Work Ethic / Problem Solving Skills

- Problem Solving Skills are demonstrated
- Makes Productive Use of Time
- Only Seeks Help when Necessary

## Program-Specific Criteria

- Puzzle appears at start (or cannot play until "New Game" clicked)
- Puzzles are picked randomly
- Dashes are determined properly
- Numbers or punctuation in puzzles are dealt with
- Letters are placed correctly to replace dashes
- Part of hangman is added when incorrect guess
- Guessing puzzle is allowed
- Partial solved puzzle is displayed in "Solve Puzzle" InputBox
- Incorrect attempt at solving puzzle results in message
- Guessing puzzle is not case-dependent
- Answer is shown if player wins or loses
- "New Game" button works

## Comments

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Mark \_\_\_\_\_ / 10