



# Team Packet

# Visual Basic Problems



## Visual Basic Problems



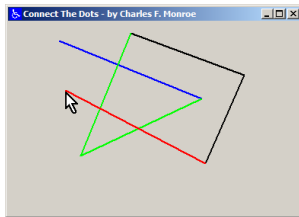
Coffee or Tea ~ 10 points



Slot Machine ~ 20 points



Make A Face ~ 20 points



Connect The Dots ~ 30 points



## Coffee Or Tea (10 points)



Create a project with a single form.

On the form, place a command button. When the command button is clicked, invoke a common dialog box to change the background color of the form.

Also on the form, create an additional command button which, when clicked, displays an Input Box that will ask the user if they would prefer coffee or tea. Set a default value of "Coffee", and position the Input Box in the upper left hand corner of the screen.

If the user responds correctly with either coffee or tea (case insensitive), a message should be displayed informing the user that their coffee (or tea, whichever they chose) will be ready in five minutes. If the user response is incorrect, the input box should be redisplayed. This process should continue until a correct response is obtained.



## Slot Machine (20 points)

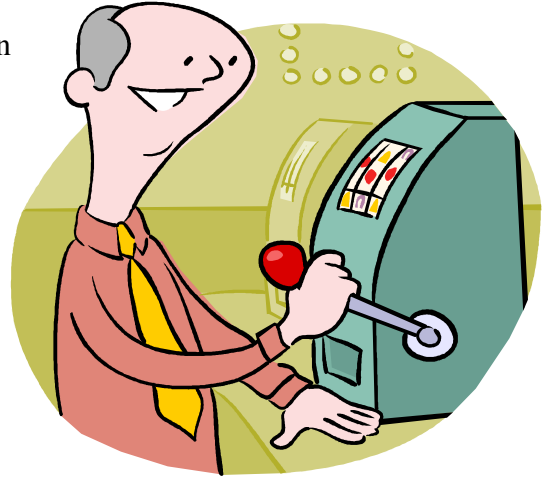
You are to design a slot machine. When the user clicks a button displaying the word "Roll", the program randomly selects and displays any combination of three images from a total of six images that you select from Visual Basic's Assorted Bitmaps\*. A cumulative score is also displayed based on the rules below. Only selected images should be visible on your form.

One of the images (you decide) is the "loser". If that image appears, the player loses all money. (Be sure to indicate which image it is.)

Another of the images (you decide) is a "wild card". If that image appears, it can match with any other image except the "loser". (Be sure to indicate which image it is.)

Scoring is as follows:

```
loser is displayed - lose all money  
2 matches - win $10 (unless loser is displayed)  
3 matches - Jackpot! win $100 (can't be losers)  
all else, roll again
```





## Make A Face (30 points)



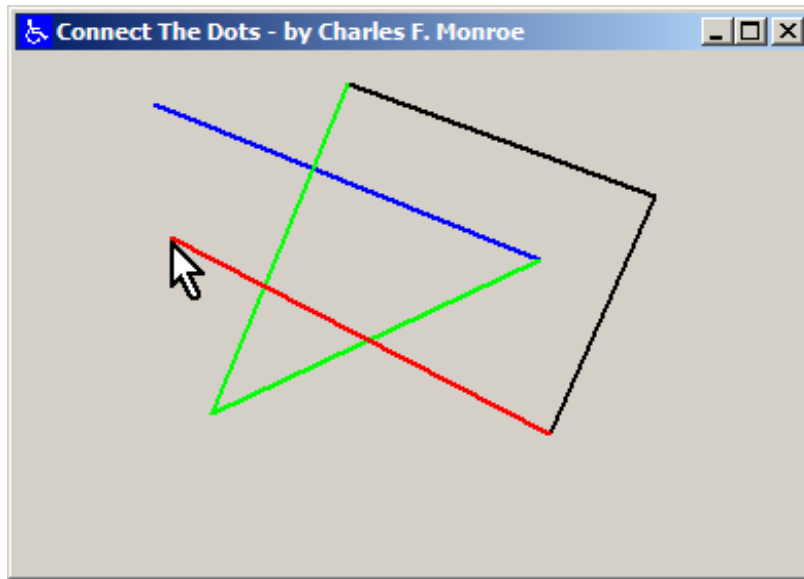
The form contains, at minimum, a slider with values from 100 to 1000 and a drop-down combo box listing at least six colors. Labels appear appropriately.

The user can select a value using the slider and a color using the drop-down combo box, then click anywhere on the form any number of times. Each time the user clicks, a round smiley face is drawn whose center is the place where the user clicked, whose radius is the value of the slider, and whose eye color is the color selected in the drop-down combo box. The face should have two circles for eyes (filled with the eye color) and a semicircle for a mouth.

*We don't expect your faces to look nearly as good as the one pictured above. 😊*



## Connect The Dots (30 points)



A blank form starts the program. It has a non-default icon and its caption contains both the name of the program and the author (team/school).

The user clicks at various places on the form, creating a series of clicks. Each series of clicks is ended by a double-click. The terminating double-click is included as the last click of the series.

For each series:

- 1) On the first click, a dot is placed at that location.
- 2) On the second click, the dot is erased and a line segment is drawn in black connecting the two click locations.
- 3) On the third click, a black line segment is drawn connecting that location to the previous one.
- 4) On each subsequent click:
  - a) A line segment is drawn connecting that location to the previous one.
  - b) If the newly drawn line segment crosses any previously drawn line segment, its color is red. Otherwise, it is black.
  - c) All previously drawn line segments crossed by the newly drawn line segment turn green.
  - d) All previously drawn green line segments not crossed by the newly drawn line segment turn blue (so black line segments remain black until crossed).
- 5) Any click that immediately follows a double-click erases all previous line segments and begins a new series.