# Assignment 1: Slot Machine

Build a one-armed bandit. I’ve built a form for you that loads four images off disk from within the solution directory structure and has a button which will spin the slot machine.

Get the Slot Machine Starter Code from Blackboard Module 2.

## Functionality

Here is what you need to build.

* A display showing how much money you’ve spent
* A display showing your current balance
* A display showing how much you won after each spin ends
* An ‘Add $5’ button that adds $5 to what you’ve spent and your current balance.
* Some sort of warning that happens when someone tries to spin but they can’t afford it.
* A restart button that sets you back to your starting money
* Good programming practice suggests that you have a variable that keeps track of money spent and current balance and you should update the display when you adjust them.

Here is the spin logic

* You start with $25.
* It costs $2 to spin – update balance when you hit the spin button
* Winnings are calculated as follows at the end of each spin
  + 3 sevens pays $25
  + 3 identical fruit pays $10
  + Any three fruit pays $1
  + Anything else pays $0
* After each spin, show the player their winnings and update their current balance
* If a player tries to spin with less than $2, show a warning
  + Of course, they can click the ‘Add $5’ button to get more money

## Deliverable

* A design document that explains any decisions you had to make, any trouble you encountered, and how your program works
* A user document that explains how to use your program (e.g. what the buttons do) with screenshots of a few key states (e.g. start screen, after a losing spin, after a winning spin, when out of money)
* Your code files (form1.cs and form1.designer.cs)

## Evaluation (total: 10pts)

* Design Document: 2 pt
* User Document: 1 pt
* Clean and Understandable Code: 1 pt
* Working Core Behaviour: 4 pts (including proper use of functions)
* Extensions (up to 2): 1pt each

## Extensions (do 2)

* Make the ‘Add $5’ and ‘Restart’ button invisible (using code, not the properties editor) until the user’s balance is below $2.
* Keep (and display) spin stats
  + e.g. 25 spins: 15x $0, 7 x$1, 2x $10, 1x $25. Spin cost $50. Winnings: $52.
  + Of course, they should start back at zero if the user restarts
* Add a ‘bonus’ mode – user can (but doesn’t have to) select a bonus fruit
  + If a bonus fruit is selected, spin now costs $3, but user wins $5 if that fruit appears twice.
* Config file (requires file i/o)
  + Read a file from the solution that contains the values for:
    - Spin Cost
    - Payouts (3 x 7, 3 identical fruit, 3 fruit)
* Image array (requires arrays)
  + Build an array of images rather than 4 variables
  + Re-build the setImage function to be less code using the array
* Make the 3 ‘wheels’ spin at different speeds
  + E.g. run the timer faster, but don’t rotate all the pictureBoxes every time.