# The Wheel of Jeopardy

This game is a computer version of a combination of two TV game programs: Wheel of Fortune and Jeopardy!.   If you don't know how to play either of these games, your first assignment is to spend a few hours watching these shows on TV. Usually these two programs are aired back to back in the 7:00pm – 8:00pm hour. Check your local listings for details. The following is a description of the rules for The Wheel of Jeopardy (WoJ) game.

Game Equipment: In the user interface to the WoJ game there will be a wheel and a question board. These are analogous to the wheel and game board in the TV programs.
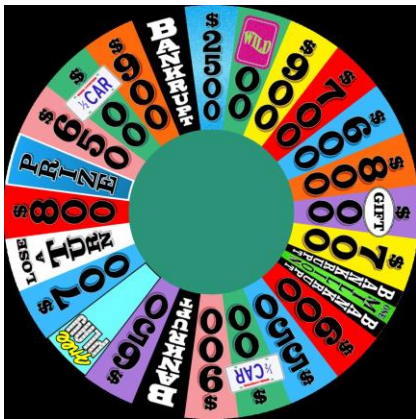
THE DINOSAURS	NOTABLE WOMEN	OXFORD ENGLISH DICTIONARY	NAME THAT INSTRUMENT	BELGIUM	COMPOSERS BY COUNTRY
$200	$200	$200	$200	$200	$200
$400	$400	$400	$400	$400	$400
$600	$600	$600	$600	$600	$600
$800	$800	$800	$800	$800	$800
$1000	$1000	$1000	$1000	$1000	$1000

Game Rules: The players take turns spinning the wheel and answering questions. When it is your turn, you will spin the wheel, and do whatever it says on the sector of the wheel.

The wheel has the following 12 sectors, randomly distributed:
- Two sectors for each of the six categories on the Jeopardy! board. When the player spins one of these sectors, they must answer the next question in that category. The questions are answered in the order of increasing point value. If the player answers correctly, they are awarded the corresponding points and gets to spin again. If incorrect, the corresponding points are subtracted from the player's score, and the player loses their turn. (Negative scores are possible.)   If all of the questions in the selected category have been answered, the player must spin again. The reason for two sectors per category is to increase the probability of selecting a question sector.
- One "lose turn" sector.
- One "free turn" sector. When this sector comes up, the player gets a token for a free turn later in the game. The token could be used if the player loses their turn by spinning a "lose turn" or answering a question incorrectly in a future turn. If this happens, the player could redeem the token and would get to spin the wheel again. The number of tokens is unlimited. After earning the token, the player spins again.

- One "bankrupt" sector. When this sector comes up, the player loses all of their points for the current round. The player loses their turn and can't use a token for a second chance.
- One "player's choice" sector. When this sector comes up, the player gets to choose which category to answer.
- One "opponents' choice" sector. When this sector comes up, the player's opponents get to select the category.
- One "spin again" sector. When this sector comes up, the player must spin again.
- The reason for two sectors for each question category is to decrease the probability of spinning things like lose turn or bankrupt and increase the probability of selecting a question.

The game is played in two rounds. In the second round, the point values are doubled from the first round (as in Jeopardy!). At the end of the game, the scores for the two rounds are added together. The player with the largest total score is the winner. In each round there are a maximum of 50 spins of the wheel. A counter should be displayed indicating the number of spins remaining in the round. A round is over if either all of the questions have been answered or if the spin count goes to zero.

In WoJ, the questions are multiple choice type questions, each with three possible answers to select from.

Options: The following options are nice to have, but not absolutely required. You can increase the value of your program by implementing these options.
- There should be a convenient way for someone to edit the set of questions & answers, as well as the categories. Instructions for doing this should be provided in the program documentation. This would be useful for, say, a high school teacher to provide drill and practice for students.
- Consider allowing multimedia questions (e.g., videos, pictures, sound).
- Animation of the wheel would be nice to have.

Here are the official websites of the two TV game shows:
http://www.wheeloffortune.com/
http://www.jeopardy.com/