



**WASHINGTON STATE MIDDLE SCHOOL
COMPUTER SCIENCE COMPETITION**

May 30, 2015

Team Challenge
90 Minutes

Please read these directions carefully before beginning. Breaking any of the rules is grounds for disqualification.

- Do not turn this page and begin working the test until the start of the test is announced. Once time starts, you will have 60 minutes to complete this test.
- You are only allowed to consult with your teammates during the competition. No talking to anyone else (including coaches) is permitted.
- No devices of any kind (calculators, phones, etc.) besides computers are allowed during the test.
- You are not permitted to have any internet browser windows open during the test.
- Items with a negative point value next to them are required - if they are not in your game, those will be subtracted from your overall score. Items with a positive point value are bonuses - choose which ones you want to include in your game.
- Partial credit can be awarded if you include an item that is not fully functional.
- Bonus points will be awarded for game design and special effects.

Requirements

The object of the game is for the user to safely maneuver the frog to the top of the screen, within the time allotted, by first avoiding cars and then jumping from log to log. Cars and logs appear on one side of the screen, move slowly across the screen, then disappear when they reach the other side of the screen.

Sprites do not need to look the same as in the example, but they must have the required names.



Required Sprites

- Frog
- Cars
- Logs

Required Variables

- Lives
- Time

Required Visuals

- Two checkpoint platforms
- At least two rows of cars, moving in opposite directions
- At least two rows of logs, moving in opposite directions
- A landing platform

When Green Flag is Clicked

- 1 point) Background including visual requirements appears
- 1 point) **Frog** appears on first platform
- 1 point) **Time** is set to 30
- 1 point) **Lives** is set to 3
- 1 point) **Frog** appears at the bottom of the screen
- 1 point) **Frog** moves right and left with the arrow keys
- 5 points) **Cars** move into view from the left and right sides of the screen
- 5 points) **Logs** move into view from the left and right sides of the screen

Frog Behavior

- 1 point) **Frog** moves left and right with arrow keys
- 1 point) **Frog** jumps forward/backward with up and down keys
- 2 points) When **Frog** jumps forward/backward, a “jump” animation takes place (he looks like he is jumping)
- 1 points) **Frog** returns to first platform (starting position) if he is hit by a car
- 1 point) “Lives” decreases by 1 if **Frog** is hit by a car
- 2 points) If **Frog** is hit by a car, an “ouch!” animation takes place
- 6 points) When **Frog** lands on a log, he moves with it as if sitting on top of it
- 1 points) When **Frog** lands in the water, he returns to the second platform
- 1 points) When **Frog** lands in the water, “Lives” decreases by 1
- 2 points) If **Frog** lands in the water, a splash sound plays
- 4 points) When **Frog** jumps to the landing platform, all sprites hide and a “You Win” background is displayed
- 4 points) When “Time” or “Lives” reaches 0, all sprite hide and a “You Lose” background is displayed

Extra Features

- 8 points) At the beginning of the game, a “choose your character” screen appears, in which you can choose what your frog looks like
- 7 points) Before the game starts, a “3 2 1 Go!” countdown displays
- 9 points) Game includes a working “pause/play” button
- 7 points) When the game ends, a working “Play Again” button appears
- 10 points) When the game ends, Level 2 starts, which has double the number of rows of cars/logs
- 12 points) When the game ends, a high score list which keeps track of the top 3 fastest times and the usernames of the players is displayed