*Remember, learning to program can take a surprising amount of time & effort – students may get there at different rates, but those who put in the time & effort get there eventually.*

Instructions

For each question, make a HTML page with some javascript that implements the functionality described. For each question, **start from scratch** without looking at the previous answer UNLESS you were able to do the previous question without asking for anyone's help. And of course, no copy pasting.

The teacher's solution is provided so that you can can understand the question. After reading the question, download and run the solution to make sure you understand it.
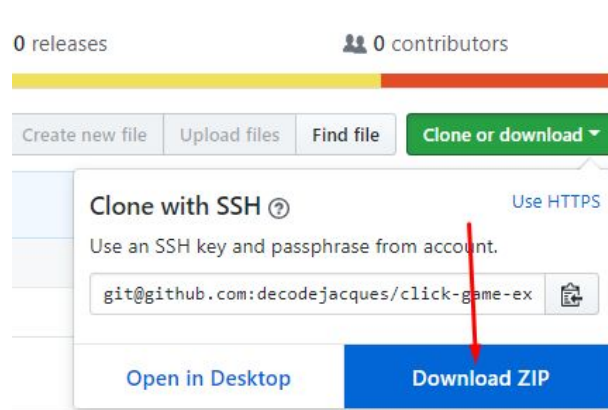
Try to do it yourself without looking at the solution source code.

Question 1

This is a reflex based game.

When the user comes to the page, he has 1 second to click the screen. If he waits more than 1 second, a message is displayed telling him that he's lost.

Hints

Use an addEventListener on the body element.

Create an empty div with an id and use it to tell the user whether he won or lost.

Question 2

When the user comes to the page, there is a random amount of time, between 1 and 3 seconds, before the round starts. Once the round has started, a message is displayed telling him so. He has 0.5 seconds to click on the screen OR press the spacebar. If he presses within the allotted time, there is a message telling him he has succeeded. Otherwise, there is a message telling him he has failed.

Question 3

Same as the previous question, except that now a button appears at a random position on the screen when the round starts. The user must click the button in 1.5 seconds. If he clicks anywhere else, he automatically loses.

Question 4

In question 2, the game started as soon as the page loaded. Change this behaviour.

Add a button. The game starts only when the button is pressed.

Question 5

Same as the previous question, but there is a button to restart the game at the end

HINT

Google "reload a page javascript"

Question 6

Same as the previous question, but now the user has to click on 5 buttons. The user will have 3 seconds to click on all of them. Each time a button is clicked, it disappears.

Don't forget, if the user clicks something that is not a button, he immediately loses.

HINT

Event bubbling might become an issue.

Question 7

Same as the previous question, but now the user has to click on a random number of buttons. The number of buttons will be between 1 and 10. If n is the number of buttons, then the user will have 1 + n * 0.4 seconds to click on all of them. Each time a button is clicked, it disappears.

HINTS

- document.createElement
- appendChild
- element.style.position = "absolute"

Question 8

Let's make a 2 player game

Both players will be on the same computer and will use the same keyboard. Player 1 uses the Q key and player 2 uses the P key.

After a random amount of time (between 2 and 8 seconds) elapses. There is a BANG sound. This signals to the players that the game has started.

If player one presses the Q key, before player two presses the P key, then player one wins the game. Otherwise player 2 wins.

If player one presses the Q key BEFORE the bang, they lose.
If player two presses the P key BEFORE the bang, they lose.

At the end, a button appears to restart the game

Question 9

No need to start from scratch for this one.

Add graphics and sounds to make the two player game more fun.

Ideas
- If a player loses the round because he is too fast, play a trombone sound.
- Add a background image
- Add an avatar on each side of the screen
- Put some background music

Question 10 (very hard)

This question is not for the faint hearted

Make the same 2 player game as described above, however, there are 5 rounds.

The first player to get to 3 points wins.

Godspeed.