Periodic Table Team Members:

Angad Vittal
Chirag Shahi
Han Huang
Heather Finnegan
Huibin Wang

Angad Vittal - axv180010:

Preliminary Prototype: Animated the Atomic Structure Model to Shrink and Grow, when the Element Selected from the Periodic Table is changed. Created the Scripts and Colliders required for the Addition of Protons, Electrons and Neutrons. Helped with the Element Tile.

Final Prototype: Implemented the adding of Electrons, Protons and Neutrons to occur on the release of the handheld controller's trigger. Investigated possibility of lerping particles and randomly generated questions (not in final project). Also recorded audio for a few questions.

Chirag Shahi - cxs180005:

Preliminary Prototype: Created the adding of particles to the element, lerping functionality and differentiating between particles interacting with the collider. Added appropriate positions for the respective particles to get added onto the element. Lastly, scaled the objects present on the scene.

Final Prototype: Created the 2D image ‘Quiz Time’ loading bar and added the functionality to make a transition to Quiz Room back and forth using the RadialProgress script. Also worked on highlighting the objects present on the scene whenever the controller is in contact with them using the HighlightObject script. Lastly, recorded question audios to be used in the quiz.

Han Huang - hxh170830:

Preliminary Prototype: Created and set up the periodic table scene, created the classroom with table and chairs, added steering script to the scene, made the periodic table, set the first 10 elements of the periodic table selectable, added the sound effect for selection and the switching of selection, implemented script to change the selected element of periodic table according to proton count/atomic number.

Final Prototype: Cropped and resized 10 periodic table card PNG pictures. Created materials of 10 elements from original PNG pictures. Transform the 2D Sprite game objects into 3D cubes to fix collision issues. Adjusted the positions of 10 elements to fix clipping issues on periodic table cards. Fix colliders on periodic table cards to not overlap into each other. Made each element easy to select. Recorded question audios to be used in the quiz.

Heather Finnegan - hxf180007:

Preliminary Prototype: Created the atomic structure model and implemented code which allows it to change based on the current element selected via the periodic table. Added code onto the Virtual Hand script to allow periodic table elements to be either selected or deselected and communicate with the atomic structure. Implemented a method for removing particles from the atomic structure which also updates both the table and tile. Created the bins, bin labels, and the interactive independent particles to add onto the structure. Created a script to streamline pop sound effect for selections and implemented it for multiple feedback conditions.

Final Prototype: Moved bins to tables, fixed removal math error for particles and added error sound when user tries to add particles to full model. Created a timer for the quiz which begins and ends based on the start of the quiz and when the last question is submitted. Created and implemented the start quiz button, submit question button, next question button, and four answer choice buttons. Created the quiz script which presents a random question from an array and uses a switch statement to display the question on the board. Script handles three different varieties of ways the user can answer depending on the question. Created the scoring system and implemented audio feedback on user's choices. Created the shake script to let to user know when the atomic structure model is unstable. Created the whiteboard. Implemented the respawn of particles after addition to the model or out of boundary. Implemented highlighting of element squares on Periodic Table. Recorded question audios to be used in the quiz.

Huibin Wang - hxw170010:

Preliminary Prototype: Creating the tile and using four UI Text object to display the information, including the number of protons, charges, the mass of the element and the name of the element, about the elements that the user has selected. And the information will change as the user change the structure of the elements.

Final Prototype: Created quiz questions. Using AudioSource and Resources to play the audio file of quiz questions at run time. Recorded question audios to be used in the quiz.