

| Day    | Topic                              | Focus  | Home work   | Notes  |
|--------|------------------------------------|--|---|--|
| Day 1  | Adding shapes                      | <ul style="list-style-type: none"> <li>Intro to basic programming (JavaScript)</li> </ul>                                    | Draw an object of choice. (e.g. a house with a window and a door) | <ul style="list-style-type: none"> <li>Syntax, Logic flow<br/>Variables, Functions, Comments</li> <li>Drawing shapes with canvas<br/>Understanding x,y axis and pixels.</li> </ul> |
| Day 2  | Move ball                          | <ul style="list-style-type: none"> <li>Functions</li> <li>Conditional Statements (if/else)</li> <li>Metric Prefix</li> </ul> | Make a the ball pulse (e.g. fireball)                             | <ul style="list-style-type: none"> <li>Frame rate</li> <li>Velocity</li> <li>Collision detection</li> </ul>  |
| Day 3  | Create the pad<br>Add start button | <ul style="list-style-type: none"> <li>Intro to HTML &amp; CSS</li> <li>Event handling</li> </ul>                            | let the ball fall through floor & make the ball bounce of the pad |  |
| Day 4  | Game Over mechanism                | <ul style="list-style-type: none"> <li>Control flow statement (for loops)</li> <li>Honing your skills</li> </ul>             | Create one row of bricks using for-loop                           |  |
| Day 5  | Build the brick wall               | <ul style="list-style-type: none"> <li>2D array</li> </ul>   | Make each brick row a different color                             | <ul style="list-style-type: none"> <li>Track score and win</li> </ul>  |
| Day 6  | Giving the player some lives       | <ul style="list-style-type: none"> <li>State management</li> </ul>   |   |  |
| Day 7  | Code refactoring                   | <ul style="list-style-type: none"> <li>Classes and methods</li> </ul>  | Create the paddle class   | <ul style="list-style-type: none"> <li>Code reusability</li> <li>Driver and client</li> </ul>  |
| Day 8  | Adding images                      | <ul style="list-style-type: none"> <li>Image manipulation</li> </ul>   | Create a drop down item power up class                            |  |
| Day 9  | Power ups                          | <ul style="list-style-type: none"> <li>Data structures</li> </ul>  |   | <ul style="list-style-type: none"> <li>List and map</li> </ul>   |
| Day 10 | Polishing                          | No stones left unturned  |   |  |
| Day 11 | District math (BONUS)              | <ul style="list-style-type: none"> <li>Permutations</li> <li>Modulo</li> </ul>   |   | <ul style="list-style-type: none"> <li>Level design</li> </ul>   |
| Day 12 | Linear Algebra (BONUS)             | <ul style="list-style-type: none"> <li>Vectors</li> <li>Transpose Matrix</li> </ul>  |   | <ul style="list-style-type: none"> <li>Level design</li> </ul>   |

Disclaimer: Depending on the student's speed, each day could take more or less than a session.