# **MXB161 Original Creation Live Script**

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| **Project description** | Write a 1-2 sentence overview describing your proposed project.  The proposed project will model urbanization in a city area. It will show the rate of change of the size of a city |
| **Unit topics** | Which two topics from the unit do you plan to synthesise techniques from?   * Cellular automata * Image processing |
| **Technique extension** | Write 1-2 sentences explaining how your project will extend at least one technique beyond what was covered in the unit.  We are extending cellular by adding ‘structures’ that other particles would stick around if they came into contact with it. Image processing’ will model the overall area of the city. |
| **Problem solution** | Write 1-2 sentences explaining how you are going to solve the problem and how the results/solution will be presented.  The model will display ‘new citizens’ as particles in a new city, starting in the center of the city then slowly moving outwards. Citizens that come into contact with a structure (e.g. an apartment building or office) will stick with it, while those unimpeded will continue out from the city. The resulting city area will then be visualized using gaussian blur to make a heatmap, and calculated using image processing. |
| **Proposed timeline**  (complete this section only after you have received feedback on your proposal) | List the key milestones (or subtasks) and associated timelines that your team will need to meet in order to arrive at your problem solution.   |  |  | | --- | --- | | **Milestone description** | **Anticipated completion date** | | Define and agree on scope of project | Day 1 | | Create spawn conditions | Day 3 | | Create resources | Day 3 | | Set automata conditions | Day 5 | | Integrate the systems | Day 7 | | Tweak conditions of all subsystems to create working model | Day 9 | | Cell count to determine the size of particle distribution | Day 14 | | Final bug fixing and write up | Day 16 | | Submission | Day 19 | |
| **Team roles and responsibilities**  (complete this section only after you have received feedback on your proposal) | List your team members and outline what part of the project each will be responsible for leading.  Daniel – Setting up and managing group Github repository, helping the team with various tasks  Caleb – implementing cellular automata code  Erin -computing area code, live script context write up  Finn - implementing some of the cellular automata code and live script write up (function explanation)  Josh – Spawn conditions and fixing group worksheets  Om – Fixing group worksheets |