**Marking Grid - Portfolio Learning Task 1: Design and Build an Automated Agent (Indicative weighting 50%)**

**Student Name & No.:** **Grade:**

*Note - Grades are not mechanically calculated but are a matter of academic judgement based on the marking criteria.*

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|  | **90-100%**  *Outstanding* | **80-89%**  *Excellent* | **70-79%**  *Very good* | **60-69%**  *Good* | **50-59%**  *Competent* | **40-49%**  *Pass* | **30-39%**  *Fail* | **0-29%**  *Fail* |
| **Virtual Environment and Theme**  **(30%)** | Near professional quality and detailed virtual world.  Environment elements support many interactions with the agent (e.g., move objects, removing connections).  The virtual world conveys a professional imaginative, interesting and/or industry relevant problem / application area / scenario.  Virtual world completely put together by the student.  All evidenced through a presentation. | High quality virtual world. Complete environment, well put together and cohesive.  Environment elements support many interactions with the agent (e.g., move objects, removing connections).  The virtual world conveys a high quality imaginative, interesting and/or industry relevant problem / application area / scenario.  Virtual world completely put together by the student.  All evidenced through a presentation. | A cohesive virtual world/scene that has been developed to a high degree. For example, many environment elements. Well put together and cohesive.  Environment elements support interaction with the agent (e.g., move objects, removing connections).  The virtual world conveys a well-developed scenario.  Virtual world completely put together by the student. | A well developed and cohesive virtual world/scene. For example, a cube for ground and many environment elements. Well put together.  Environment elements support some interaction with the agent (e.g., move objects).  The virtual world conveys a scenario.  Virtual world completely put together by the student. | A satisfactory virtual world/scene exists. For example, a cube for ground and several environment elements and some background environment elements. Things missing in places.  The virtual world conveys a rudimentary  scenario.  Virtual world completely put together by the student. | A rudimentary virtual world/scene exists. For example, a cube for ground and a few environment elements.  The virtual world may not convey a  scenario.  **OR** – Elements of the virtual world is partially based on a premade scene. | A very rudimentary virtual world/scene exists, but very little attempt has been made. For example, just a cube for ground.  **OR** – The virtual world is partially based on a premade scene. | No virtual world exists. May be some separate models exist.  **OR** – The virtual world is completely based on a premade scene. |
| **Waypoint graph**  **(5%)** | Extensive waypoint graph created, and thought has gone into the design (e.g., one-way, both sides of the road, may respond to events). High level of polish / goes well beyond the assignment requirements in many places. | Extensive waypoint graph created, and thought has gone into the design (e.g., one-way, both sides of the road, may respond to events). High level of polish / goes beyond the assignment in places. | Extensive waypoint graph created, and thought has gone into the design (e.g., one-way, both sides of the road, may respond to events). | Extensive waypoint graph created. 10 plus nodes. Some thought has gone into the design in places. | Satisfactory waypoint graph created. Around 8 nodes. Connections two-way, but limited thought has gone into the design. | Simple waypoint graph created. Few nodes. | Basic attempt at a waypoint graph. | Very poor.  **OR** - Unity’s built-in nav system used.  **OR** -implementation relies significantly on tools, libraries, or other sources. |
| **Agent functionality including pathfinding and extensions**  **(50%)** | A\* working and aligns to the module workshop.  Obstacle avoidance well developed. High level of polish / goes beyond the assignment.  Console or UI printout. All performance  Metrics implemented. High level of polish / goes beyond the assignment.  Many extensions, such as the previous ones, new path cost. High level of polish / goes well beyond the assignment requirements in many places. Near professional quality.  All evidenced through a presentation. | A\* working and aligns to the module workshop.  Obstacle avoidance well developed. High level of polish.  Console or UI printout. All performance  Metrics implemented. High level of polish.  Many extensions, such as the previous ones, new path cost. High level of polish and depth.  All evidenced through a presentation. | A\* working and aligns to the module workshop.  Obstacle avoidance developed. May be minor issues.  Console or UI printout. All performance  Metrics implemented. May be minor issues.  Extensions, such as the minor ones and robust obstacle avoidance, other instances, respond to environment events. | A\* working and aligns to the module workshop.  Obstacle avoidance mostly implementation. Maybe issues.  Console or UI printout. Mostly implemented  performance  metrics.  Minor extensions (e.g., time and distance on screen, navigate to other destinations, user can select goal locations, simple obstacle avoidance). | A\* working and aligns to the module workshop.  Obstacle avoidance basic implementation. Maybe issues.  Partly implemented  performance  metrics– printed to the console.  Maybe minor extensions (e.g., time and distance on screen). | A\* working or mostly working.  Obstacle avoidance attempted.  Some attempt  made at  performance  metrics.  Maybe minor extensions (e.g., time and distance in console).  May be issues with A\* implementation or how the waypoint graph is setup. | A\* attempted, but not working.  Basic obstacle avoidance attempted.  Basic attempt at measuring performance.  Might use straight-line movement along a fixed route instead of A\*. | Very poor.  **OR** - Unity’s built-in navigation system used.  **OR** -implementation relies significantly on tools, libraries, or other sources. |
| **Presentation of core features and extensions**  **(15%)** | All presentation requirements completed to an excellent standard. High level of polish / goes well beyond the assignment requirements in many places (e.g., extensions). | All presentation requirements completed to a very good/excellent standard. No lack of scope in extensions. | Presentation video is complete and meets all requirements. It lacks in detail in a few places (e.g., information about extensions is high-level in a few places). Or there is some lack of scope in the extensions. | Presentation video is complete and meets most requirements. It lacks in detail (e.g., information about extensions is high-level or missing). Might lack clarity in places. Or there is a lack of scope in the extensions. | Presentation video but lacks in detail and clarity.  Audio might be embedded in slides rather than a separate video. | Very basic presentation. Might be separate videos. | Very poor – might be a few slides, but not video. | No presentation video. |

**Additional Feedback / Comments:**

**What you did well:**

**What you need to improve:**