DPS941 – Lab 2 Reflection

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Mapping in autonomous robots is the act of the robot perceiving its surroundings with the use of sensors (Such as LIDAR) and creating a “map” of its environment which can help it plan movement, interactions with its environment easier.

The map’s accuracy is extremely important for the robot’s autonomous navigation task, as if the distances are incorrect or walls are mapped incorrectly it could cause the robot to malfunction when hitting obstacles, however this could be avoided if even when mapped the robot continues to use its sensors.

Dynamic objects in autonomous robotics refers to objects that are not static/unchanging such as building structures, or walls, whilst dynamic objects and moving, their data such as positioning is changing and complex.

Dynamic objects should not be present when mapping an area as they can greatly hamper the creation of the map, and a map should have an exact map of the area, not one with changing variables. However, in practice dynamic objects need to be accounted for aka perceived by sensors in navigation of a mapped area as to not accidentally interact with them.