ENPM808X-Software Development for Robotics

Week 3 Written Responses

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5.1 How are software changes classified by their purpose? What is the most common purpose of the change?

- Perfective changes

  Changes that introduce new functionality and increase the value of the software is called perfective changes.
- Adaptive change:

  Changes that adapt software to new circumstances within which the software operates are called adaptive changes. The purpose of adaptive change is to protect the existing value of the program.
- Corrective changes:

  Changes that correct software bugs and malfunctions that are deviations from the intended functionality and impact users are called corrective changes.
- Protective changes:

  These changes are invisible to the user and they shield the software and its value in a proactive way.

The most common purpose of the change is perfective changes.

5.3 When is it permissible to do quick-fix changes?

It is permissible to do a quick-fix change in circumstances or situations of emergency where human life or a substantial value is at stake and speed outweighs every other consideration.

5.5 What is a product backlog?

When making a software change, we have a set of requirements for the desired functionality which may come from users or programmers and managers. Usually there exists more than one requirements that programmers have to manage. These set of requirements are stored in a product backlog.

The product backlog describes and lists the desired requirements for future product properties and functions. It is part of the software work products which are updated as the project progresses over time.

6.6 Describe a situation when a grep search fails. What would you do if this happened to you?

Grep fails in a search for implicit concepts when their names usually do not appear in the code because there is no code, identifier or comment that indicates the presence of the concept extension.

In such situations, programmers must use other concept location techniques such as dependency search.