

ENPM808X: Software Development for Robotics

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Software Engineering 5.1

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

Software changes classification based on their purpose are:

- **Perfective changes** usually include additional features and functionalities to improve the value of the software.
- **Adaptive changes** are made to adapt the software to new circumstances in which the software will need to be operated in.
- **Corrective changes** are made for fixing bugs and malfunctions in the software.
- **Protective changes** are made to make future changes easy.

Software Engineering 5.3

Q: When is it permissible to do quick-fix changes?

Quick-fix should be the last thing one should implement to save a complete system failure. In situations where potential loss is not acceptable (ex: humal life is endangered), quick-fix can be permissible.

Software Engineering 5.5

Q: What is a product backlog?

Product backlog also known as requirements database is a list of desired changes, additional features, functions which are planned to be added in the future. It describes a shared vision of the project stakeholders and developers for the future of the product.

Software Engineering 6.6

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

Grep search often fails if the query does not produce a result. In searching implicit concepts whose names usually do not appear in the code, grep search tends to fail.

In cases where grep search fails, we should try using other concept location techniques. Also developing a practice of selecting good identifiers and proper commenting in code can greatly enhance the search efficiency.