

**NATURE OF RISK AND MANAGING RISK**

- Risk is the potential future harm that may arise from some present action.
- Management is a process that is used to minimize or eradicate risk before it can harm the productivity of software.
- There are two risk strategies namely reactive strategies and proactive strategies.
- A reactive software engineer corrects a problem as it occurs, while a proactive software engineer starts thinking about possible risks in a project before they occur.
- There are several types of risk that can occur during a software development project.
- The same is illustrated in table

Risk Type	Description
Generic Risk	Generic threats across all projects. For example, requirements change, loss of team members, loss of funding.
Products- Specific Risks	High level risk associated with the type of product being developed. For example: availability of testing resources.
Project Risks	Affect project schedule or resources.
Product Risks	Affect quality or performance of software.
Business Risks	Affect the viability of the software.

**MANAGING RISK**

- Risk management is a management specialism aiming to reduce different risks related to a preselected domain to the level accepted by society.
- It may refer to numerous types of threats caused by environment, technology, humans, organizations and politics. Risk management is a way to manage risks.
- In other words, it concerns all activities that are performed to reduce the uncertainties associated with certain tasks, or events.
- Risk management in any project requires undertaking decision making activities.
- It provides a disciplined environment for proactive decision making to:
  - ❖ Assess continuously what could go wrong (risks)
  - ❖ Determine which risks are important to deal with
  - ❖ Implement strategies to deal with those risks

**Risk Management in Software Projects Has Different Uses.**

- It helps to save projects from failing due to different factors such as non-completion of projects within the specifies schedule, and budget constraints, and not meeting customer expectations
- The main purpose of risk management is to know all possible risks to a project, assess their severity, and consequence, and then determine resolution steps depending on the nature of the risks.
- The idea is to minimize any unforeseen and unexpected issues arising during the course of the project by properly planning for eventualities
- Before applying any risk management process, the project team members should be clear about the following dimensions of risks in their projects:
  - ❖ The nature of uncertainty involved, and the likelihood with which the risk will occur.
  - ❖ The loss that will be incurred if the risk occurs.
  - ❖ Loss in software projects can take many forms including loss of revenue, loss of market share, and loss of customer goodwill.
  - ❖ The severity of the loss.
  - ❖ The duration of the risks.