

# Software Project Management

Day 1: INTRODUCTION & COURSE INFO

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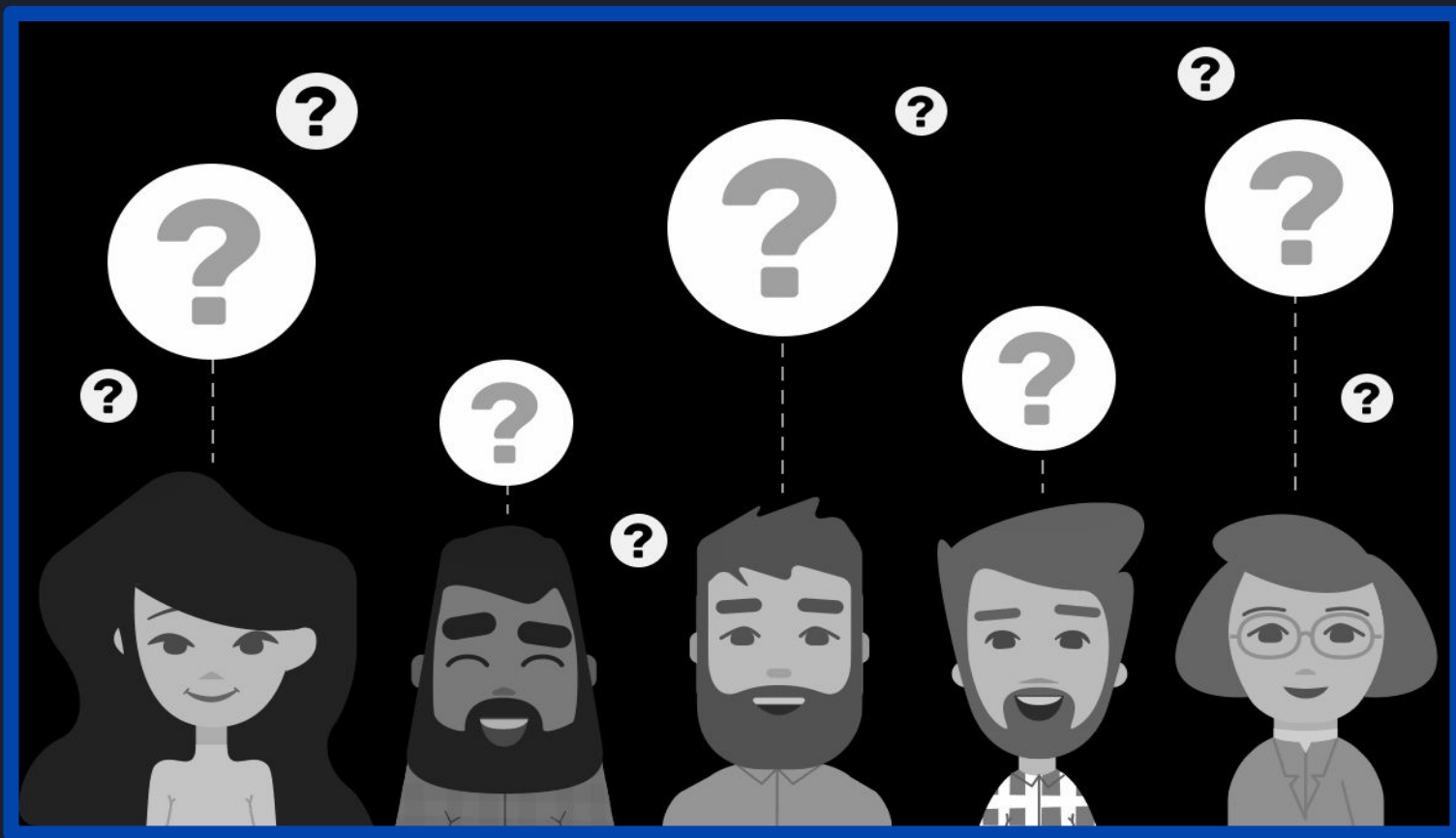


# Course Tutor: Pratik Shrestha

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## Current Work Involvements:

- Co-Founder/COO @ Firefly Services Pvt. Ltd.
- Lecturer @ IIMS College and The British College
- MScIT (Information Management) from Leeds Beckett University
- BEIT from Pokhara University
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# About this Course

**4** Months | **18** Weeks | **14** Class Sessions - 2 hrs each

**Mostly Theory & Case Study** - with Occasional Demo

2 Assignment (20%) | Quiz (10%) | MidTerm(20%) | Final Exam (50%)

Week 12 - MIDTERM EXAM

Week 15 -Assignment Submission Deadline

Week 19 - Final Examination



# Learning Objectives

- ⇒ Understand the growing need of Project Management, specially in the IT industry.
- ⇒ Critically evaluate the tools and techniques of a IT Project Manager
- ⇒ Investigate the variety of PM methodologies used for monitoring and controlling projects.
- ⇒ Critical analysis of case studies associated with contemporary project management issues
- ⇒ Project Management as a profession - its History, role of organizations like Project Management Institute (PMI), importance of ethics and advancement of project management softwares

## COURSE OUTLINE

Week	Course Title	Topics of Interest
W1	Introduction to Course	Project, Project Life Cycle, Triple Constraints
W2	Project Management Framework	Predictive Models, Agile Framework, SCRUM, Kanban
W3	PM Process Groups	Case Studies, WBS, SCRUM
W4	Project Integration Management	SWOT Analysis, NPV, Project Charter
W5-7	Scope, Time and Cost Management	RTM, WBS, Gantt Chart, Network Diagrams, SMART, EVM, SPI.
W8	Project Quality Management	Cause Effect Diagrams, QC Charts, Statistical sampling - Six Sigma, QA
W9	Human Resource Management	Motivation Theory, Philosophies and Models
W10	Communications Management	Non Technical / Soft Skills
W11	Risk Management	PRINCE 2, RBS, Delphi Technique, SWOT, Risk Register
W12	Procurement Management	Point of Assumption, Cost Reimbursable Contracts, SOW Plan
W13	Stakeholder Management	SR, Power Grid, Assistive Softwares

# Why Is Project Management Important?



2018 Data from PMI



# Need further motivation ?

- ⇒ PMI estimate for project management jobs in the last decade (2010-20) was **15.7 million**.
- ⇒ **6.2 million** jobs under that predicted were from United States alone.
- ⇒ Lowest average base salary is **\$75,000/yr** as of Apr, 2022 according to [Payscale Inc.](#)
- ⇒ You get to learn and re-evaluate teamwork, problem solving, task management and soft skills.
- ⇒ Case Studies in upcoming class.





## Project Management Professional (PMP) Jobs by Salary

Job Title	Range	Average
Project Manager, (Unspecified Type / General)	\$62k - \$127k	\$89,542
Senior Project Manager, IT	\$90k - \$149k	\$118,311
Project Manager, Information Technology (IT)	\$70k - \$135k	\$98,452
Information Technology (IT) Director	\$93k - \$193k	\$145,623
Director of Operations	\$70k - \$176k	\$120,417
Program Manager, IT	\$90k - \$156k	\$122,336
Vice President (VP), Operations	\$90k - \$219k	\$150,477

# Advantages of formal Project Management

Consistent communication

Effective resource allocation

Higher productivity

Improved customer satisfaction

More flexibility

Higher risk tolerance

Improved morale

Better planning

Learning by retrospection

Quality control



# What is a Project ?



A word cloud on a blue background featuring the following text: Olympics, Harry Potter, Wembley Stadium, Dharahara Tower, Marvel, WHO COVID Response, Leaning Tower of Pisa, Google Glass, Airbus 380, and Boeing 787. The words are arranged in a circular pattern, with 'Wembley Stadium' and 'WHO COVID Response' being the most prominent.

Olympics  
Harry Potter  
Wembley Stadium  
Dharahara Tower  
Marvel  
WHO COVID Response  
Leaning Tower of Pisa  
Google Glass  
Airbus 380  
Boeing 787



# PROJECT.

- ⇒ A project is □ a temporary endeavor undertaken to create a unique product, service or result. □  
-(PMBOK® Guide, Fifth Edition 2013)
- ⇒ Projects have a lifespan
- ⇒ Projects end when objectives have been met or the project has been terminated
- ⇒ Projects can be large or small scale and may take variable duration to complete



# Attributes of a Project

- ↪ It has a unique and definitive purpose
- ↪ It is temporary in nature
- ↪ It is developed using progressive elaboration
- ↪ It requires resources - often of various kinds and from various sectors
- ↪ It needs to have a primary customer or sponsor - who usually provide the direction and funding
- ↪ It almost always involves uncertainty

## Characteristics of a project



A clear start and  
end date



A project has  
boundaries

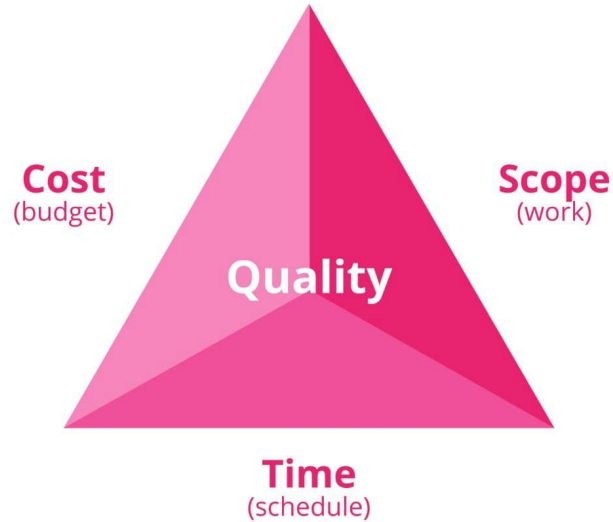


A project creates  
something new

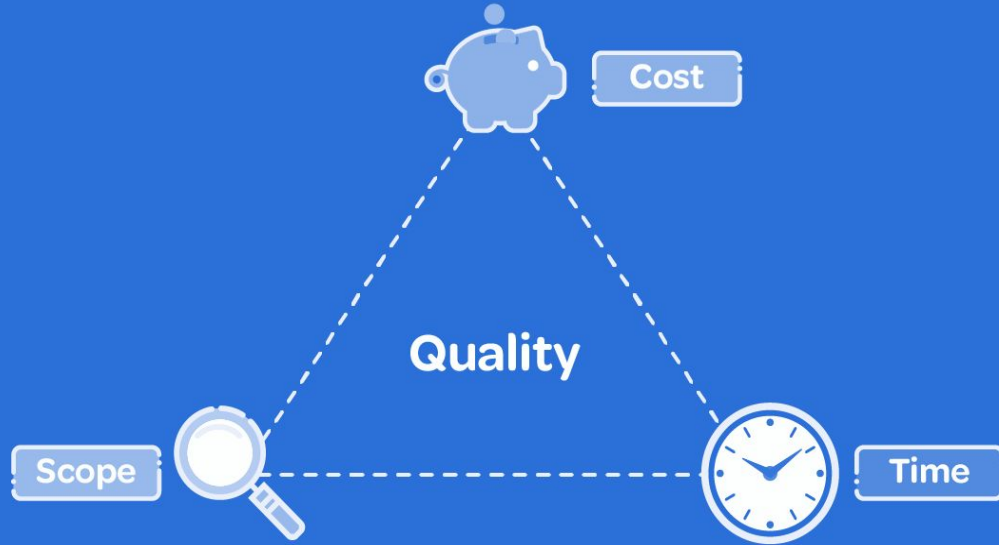


A project is not  
business as usual

# The Triple Constraint of Project Management



# Effect of constraints







# Research Information from Case Studies

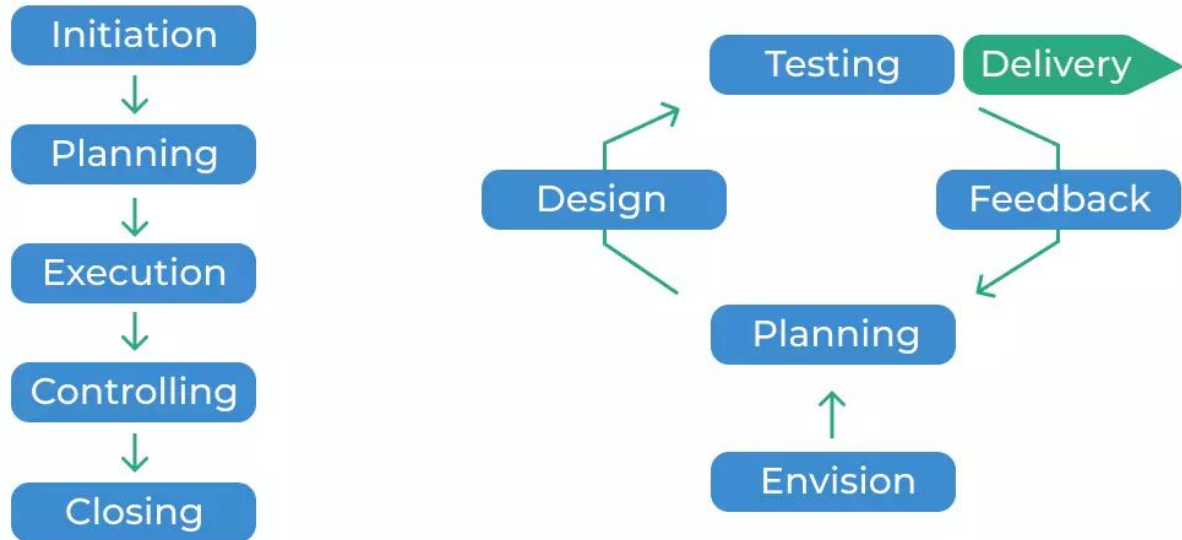
- ⇒ **1995 Standish Group Study (CHAOS)** found only 16.2% of IT projects were successful in meeting triple constraints; and over 31% were canceled before completion
- ⇒ A **PricewaterhouseCoopers (PWC)** study found that overall half of all projects fail and only 2.5% of corporations consistently meet their targets for scope, time and cost goals for all types of projects.
- ⇒ **Boeing 787 Project:** 1st Delivery of May 2008 was missed by 3 years and launched on Oct 2011
- ⇒ **Airbus 380 Project:** Airplane model deployment Deadline missed on 2006. Delayed by one year due to plane's weight being too heavy as the entertainment systems weight was not accounted for.











# What is Project Management ?

- ⇒ ☐ Project Management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements. ☐ - PMBOK® Guide, Fourth Edition, 2013.
- ⇒ Project Managers strive to meet the **triple constraint** (time, cost and scope) goals and facilitate the entire process to meet the needs and expectations of project stakeholders.
- ⇒ The two main approaches to project management are - traditional and agile framework

# Traditional vs Agile Workflow



# Project Life Cycle Types

Successful	Unsuccessful		
 			
Defined time and budget are met	Client changes exceed developer's expectations	Developer runs out of time to deliver the product	Client refuses any advice & deters progress
Product quality matches client expectations	Objectives at start differ from those at end		
Satisfied Customers			



# Chapter Summary

- ⇒ Project is a temporary endeavor undertaken to create a unique product, service or result
- ⇒ PM is application of knowledge, skills, tools and technique on activities to meet requirements
- ⇒ Project Characteristics
- ⇒ Advantage of Project management
- ⇒ Triple Constraint of Project Management
- ⇒ Traditional Vs Agile Approach
- ⇒ Project Life Cycle - Successful and Unsuccessful Types



# Task for Weekend

## RESEARCH

- TASK 1: Study The CHAOS Report - It is a study based on The [[Standish Group]]'s CHAOS Research Project on IT project success rates and project management best practices.
- **TASK 2:** Find a topic about one successful or unsuccessful project ( preferably from IT domain )

Prepare a title for the second task, this will be used for your "Assignment Task" as one of the course requirements to be submitted on Week 15.



THANK YOU  
ALL