



Agile Project Management

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Introduction

Meet your instructor

- Who am i ?
 - Education
 - Work experience

Why I am teaching?

- To learn
- To share what I know



Ilm should make you humble.

The more ilm you get, the more humble you should become !

To make my profile better

To know new people

My interests

- Travelling
- Reading
- Hosting
- Poetry
- Teaching



Teaching Style

- Practical scenarios with minimum theory
- Discussion Based class
- Two way discussion, I will ask you your experiences
- Your version of the story



Teaching Style

- We'll be learning from each other.
- No one knows everything
- The day you think you have learned enough is the day you progress stops.

AGENDA

- Teaching Style ?
 - We ll discuss about topics of mutual interests like team building, environment
 - How to keep environment of our class friendly and comfortable
 - Participation is extremely encouraged

Few Rules

- Although discussion is encouraged.
 - No hate speech
 - No one is allowed to hurt anyones sentiments.

- Class Timings
- Saturdays – 3:00 pm – 6:00 pm
- In case of any Unexpected chutti – Due to any reason,
We ll have to select an alternative day, will do it by
Jamhoori Riwayat !
- Inform me incase of leave.

- Marks Distribution
 - 100 Marks Total
 - 15% Weightage is for class participation
 - 10% Quiz
 - 25% Mids
 - 50% Final
 - You'll have very good chance of Scoring an A as marks are distributed throughout.
 - Key to get good Score ? - Listen to class discussions carefully

AGENDA

- Answer to Questions
 - I will try to answer the questions to the best of my knowledge.
 - Few Answers will be in next lectures so we will postpone the answer
 - Can discuss few answers in person as they will need 1-1 Discussion
 - Since no one can say ‘I know everything’. So theres a possibility I don’t have knowledge about a particular topic. We can mutually learn that thing.
 - If I don’t know the answer, I ll ask for any volunteers if he knows.
 - If no one knows, we can study about it and come back with an answer

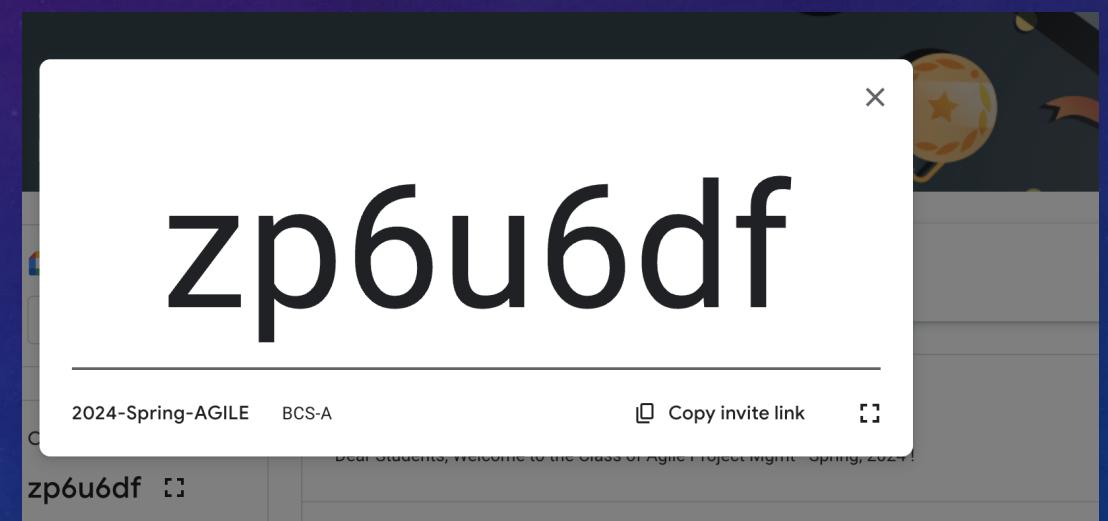
AGENDA

- Examination Pattern?
 - No ratta based paper, no long huge paragraphs.
 - Short Q/A
 - Concept based and Understanding Based.
 - Few Definitions, that too wont need ratta, if you understood it well, you ll do great.
 - My Expectations have been set here. Now lets ask your expectations !

CONTACT DETAILS

- Email address : ali.shan.v@nu.edu.pk Academic Queries
- Email address: ali.shan@securiti.ai (Professional / Job Related Queries / Resumes etc.)

GOOGLE CLASSROOM



RECAP

AGENDA

RETROSPECTION

- What went well
- What went bad
- What to improve

SPRINT

RETROSPECTION



AGENDA

What did we just do?

- We have clearly defined the expectations
- We have clearly defined what we are gonna do
- We *Retrospected* ourselves
- What is RetroSpect?
 - What went well?
 - What went wrong?
 - How to improve?

AGENDA

Retrospect is an Agile Concept

Agile concepts are applicable in daily lives as well !

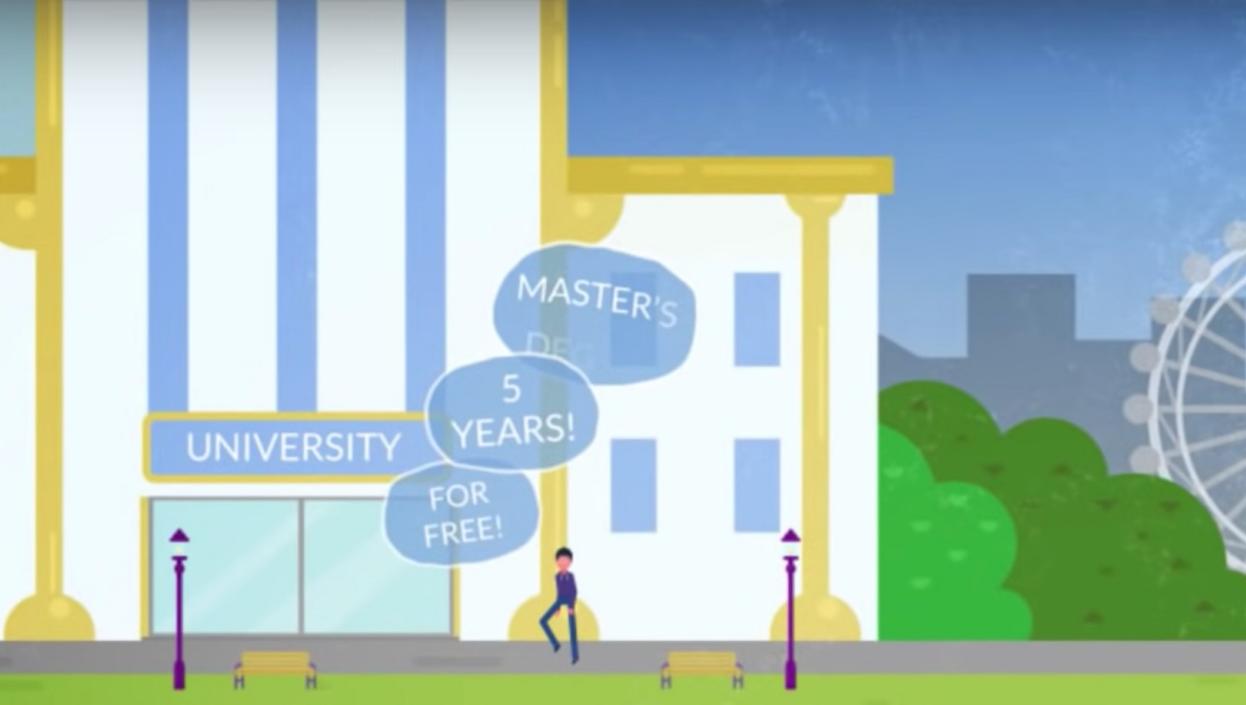


The background of the slide features a complex, abstract design. It consists of numerous thin, curved lines in various colors (pink, purple, blue, orange) that radiate from a central point towards the edges of the frame. Superimposed on this radial pattern are several concentric circles of different sizes, some solid and some dashed. Numerical values are printed along the outer arcs of these circles, ranging from 140 at the top to 260 at the bottom. The overall effect is one of motion and data visualization.

RECAP

OPURTUNITY COST



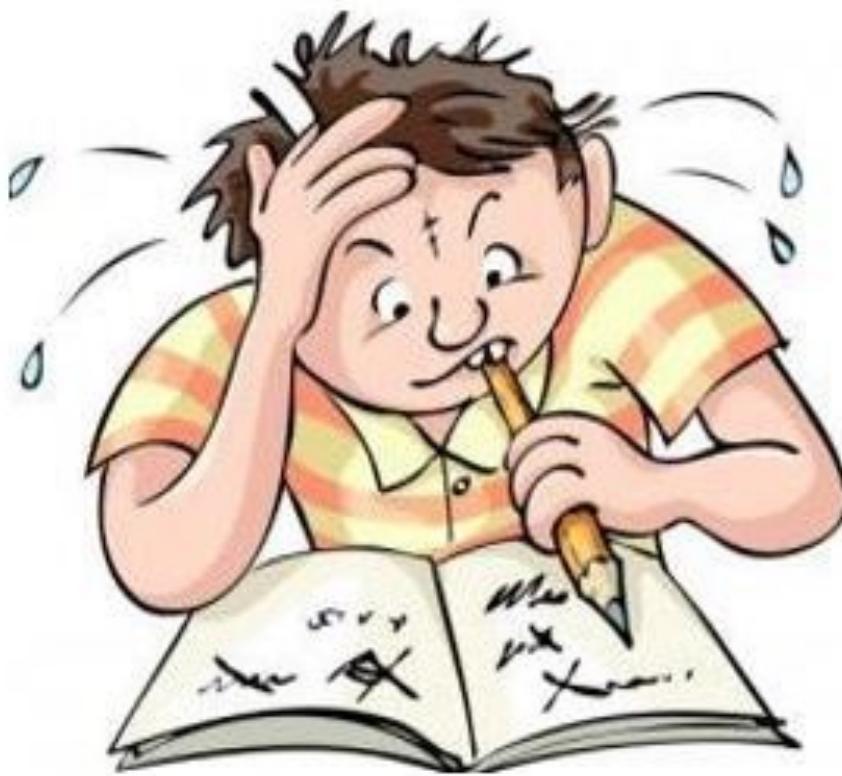


COST OF EVERYTHING

***1 hr. of
studying***



***2 TV
episodes***



**John studies all
night for his exam.**

**Next day
John is
very sleepy.**



**A good night's
sleep.**

UNDERSTANDING OPPORTUNITY COSTS

EXAMPLE



YOU CHOOSE TO SPEND ON



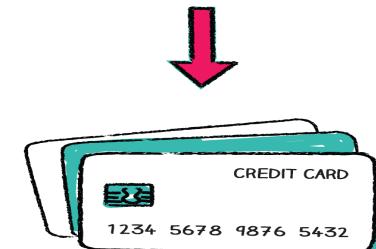
VACATION

\$5,000 IN EXPENSES

+ \$1,033 IN
OPPORTUNITY COSTS

TRUE COST OF VACATION:
\$6,033

NEXT-BEST OPTION



PAYING OFF CREDIT CARD

\$5,000 BALANCE AT 15%

IF YOU PAID IT OFF TODAY:
SAVE \$1,033 IN INTEREST*



*ASSUMES MAKING \$200 MONTHLY PAYMENTS TOWARD THE BALANCE.



OPPORTUNITY COST

WHAT A PERSON SACRIFICES, WHEN HE
CHOOSSES ONE THING OVER ANOTHER.



“That which is seen and that what is not seen”

The background of the image is a dense, abstract pattern of thin, curved lines in various colors, primarily shades of purple, red, and blue, set against a dark, textured background. The lines are concentrated in the center and radiate outwards towards the edges.

RECAP

RECAP

Daily Scrum vs Retrospect

KODAC Moment

Why change is inevitable

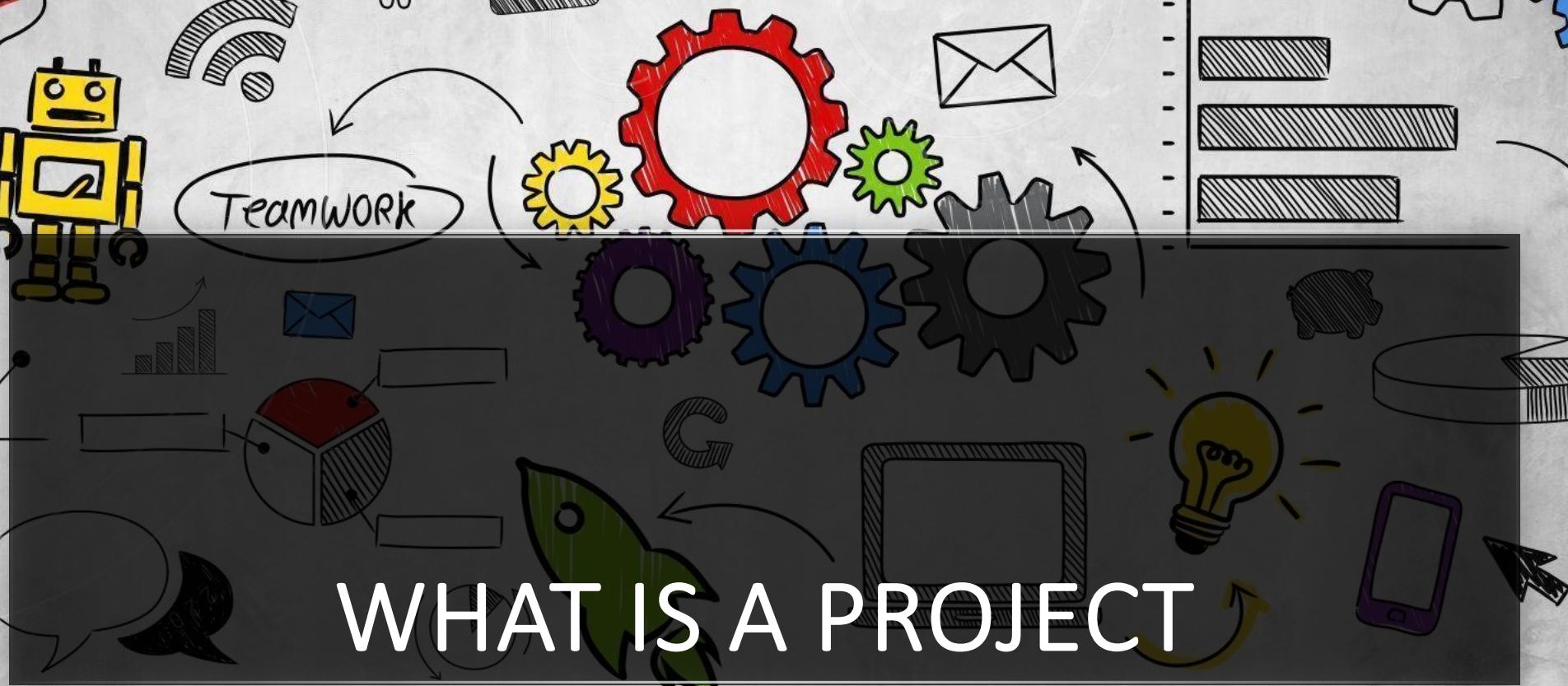
Why KODAC saw a downfall

Companies similar to KODAC that didn't adapt

Brand name that are alternative to service name

Opportunity Cost

$$a^2 + b^2 = ab^2$$
$$a(a+b) = (a \times a) +$$



What is a Project?

Temporary Endeavor

Time Bound

Creates a Unique Product

Service

Result

Examples

Constructing a House

Designing a new Smart Phone

Creating an LMS

Launching a Space Ship

Setting up a Call Centre

SOME MORE EXAMPLES

Planning and executing the renovation of a kitchen, including tasks like selecting materials, hiring contractors, and managing the budget.

Key Elements: Defined scope (kitchen renovation), specific timeline, resource allocation (budget, contractors).

SOME MORE EXAMPLES

Description: Creating a new mobile application, involving stages such as requirement gathering, design, coding, testing, and deployment.

Key Elements: Defined scope (mobile app),Defined time period, collaboration among developers, timeline.

Project is NOT



Doing Daily
Tasks



Answering
Phone



Making Coffee



Replies to
Emails



Attending
Meetings

They all are
Business as
Usual i.e every
day ongoing
normal
activities

Doing Daily Tasks

Answering Phone

Making Coffee

Replies to Emails

Attending Meetings

$$a^2 + b^2 = ab^2$$
$$a(a+b) = (a \times a) +$$

WHAT IS A PROGRAM



Program and Portfolio



Program - A group of related projects is called a program.



Portfolio—A portfolio is a group of related programs, with the objective to deliver business outcomes.

CONSTRUCTION COMPANY



Project—Construction of a house



Program—Construction of a housing complex



Portfolio—All the housing projects of the company

AEROSPACE ORGANIZATION



- Project—Building the launch vehicle



- Program—Successful launch of a satellite



- Portfolio—All the active satellite programs

IT ORGANIZATION



- Project—Development of the shopping cart module



- Program—Development of a fully functional e-commerce website



- Portfolio—All the websites developed by the company so far

SOME MORE
EXAMPLES
PLEASE?

PLEASE SHARE SOME MORE EXAMPLES?



SOME OTHER DAILY LIFE EXAMPLES



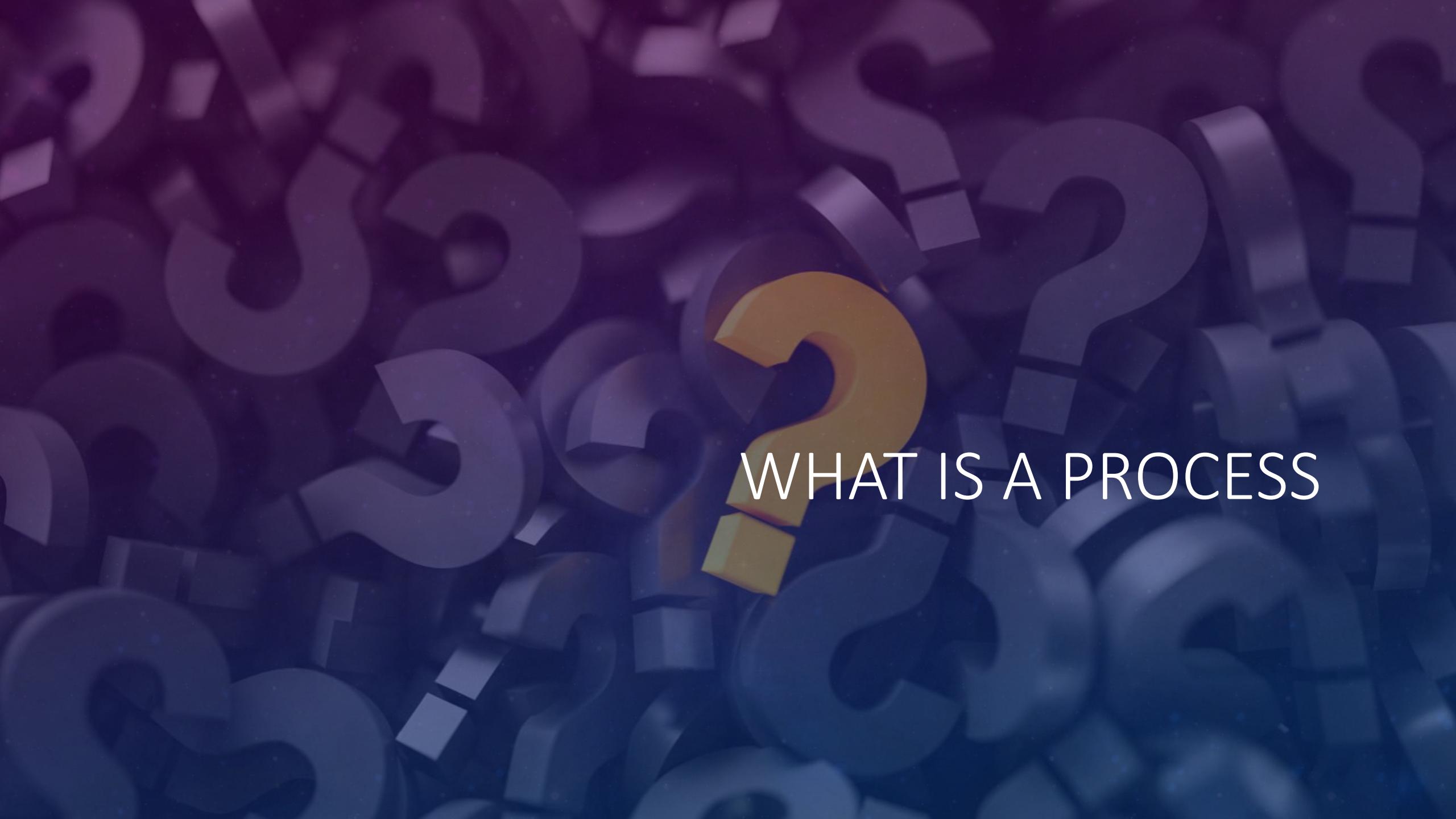
Planning a trip



FASTs Masters
Program



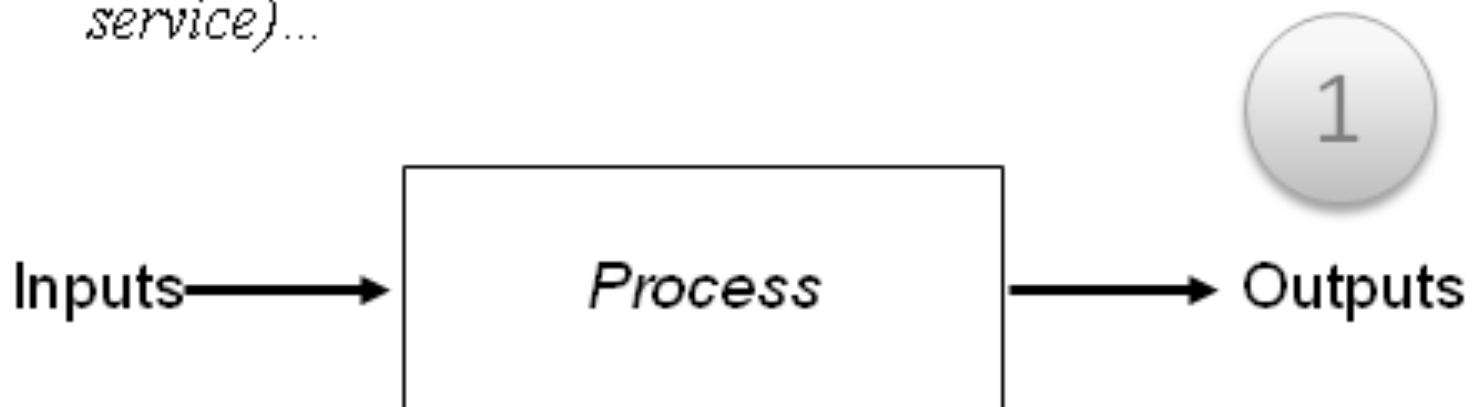
House
maintainance



WHAT IS A PROCESS

Process Definition

A process transforms an input (idea, raw material, information, decisions, etc.) into an output (good or service)...



WHAT IS A
PROCESS

WHAT IS A PROCESS

1. A Series of Actions or Steps

- A process is a **series of actions or steps** taken to achieve a particular end or goal.
- Each step in the process contributes towards overall progression towards the end result
- Example: Cooking a meal

WHAT IS A PROCESS

2) A method or system for accomplishing something

- A **methodical approach**
- A system for accomplishing a task or reaching an objective.
- It outlines the procedures and guidelines to be followed to ensure **Effectiveness** and **Efficiency**.
- Example: Morning routine to get ready

EFFECIENCY VS EFFECTIVENESS

Are they same

Can they be used
interchangeably?

Whats more important,
effeciency or effectiveness?

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RECAP



**“There is nothing so useless as
doing efficiently that which
should not be done at all.”**

—Peter Drucker

EFFECTIVENESS



It focuses on doing the right things.



Ensuring that the desired results are accomplished.



Being effective ensures that the end result aligns with the overall purpose and objectives of the task or project.

EFFICIENCY

Efficiency, relates to the ability to accomplish tasks or achieve objectives with minimal waste of resources

Such as time.

Money

Effort.

It's about doing things in the best possible manner.

Maximizing output while minimizing input.

EFFICIENCY

Being efficient enables you to accomplish tasks in a timely and resource-efficient manner.

Leading to higher productivity and better resource management.

EFFECTIVE & EFFICIENT

Building an app with proper utilization of resources.

- AWS S3 Buckets
- EC2 Instance configuration
- Testing Environments availability

EFFECTIVE & EFFICIENT

Managing Email Inbox:

Effective: Responding promptly to important emails and delegating or deferring less urgent ones.

Efficient: Using filters and labels to organize incoming emails and unsubscribe from newsletters or promotions that clutter the inbox.

EFFECTIVE BUT NOT EFFICIENT

Building an app with improper utilization of resources.

- Misuse of AWS S3 Buckets
- EC2 Instance configuration.
 - Disk 700GB
 - CPU 16core
 - Memory 32GB
- Testing Environments availability
 - Available over weekends and public holidays

EFFECTIVE BUT NOT EFFICIENT

Manual Data Entry (NED Example)

Payment methods for smaller amounts

- Cross Cheques
- Pay order

Doing cores manually for which easy automation is available

NEITHER EFFECTIVE NOR EFFICIENT

Building a feature which wasn't needed.

- Misuse of AWS S3 Buckets
- EC2 Instance configuration.
 - Disk 700GB
 - CPU 16core
 - Memory 32GB
- Testing Environments availability
 - Available over weekends and public holidays

NEITHER EFFECTIVE NOR EFFICIENT

Doing tasks manually which aren't needed

Washing already washed clothes with hands

Going alone to Hyderabad by driving a 50 seater bus

NOT EFFECTIVE BUT EFFICIENT

During work, responding to emails and phone calls quickly which could have been avoided and don't contribute towards your organizational goals.

Attending meetings, taking notes quickly, which aren't really needed.

Cleaning an Already Spotless Room

Preparing for a Simple Task

PROCESS - CONTINUED

- A natural or established sequence of events
- A formalized set of procedures or operations

Employee onboarding process

1. The process of onboarding new employees in a company typically involves steps such as
2. Completing paperwork,
3. Setting up computer systems,
4. Conducting orientation sessions,
5. Introducing them to their roles and responsibilities

SOFTWARE PROCESS

“A set of activities and associated outcomes
that produce a software product”

SOFTWARE PROCESS

“What would be those activities?”

SOFTWARE PROCESS

Four Key Software Process Activities.

- Software Specifications
- Software Development
- Software Validation
- Software Evolution

SOFTWARE SPECIFICATION



Requirements

Elicitation
Analysis
Prioritization



Functionality of Software



Constraints/Limitations

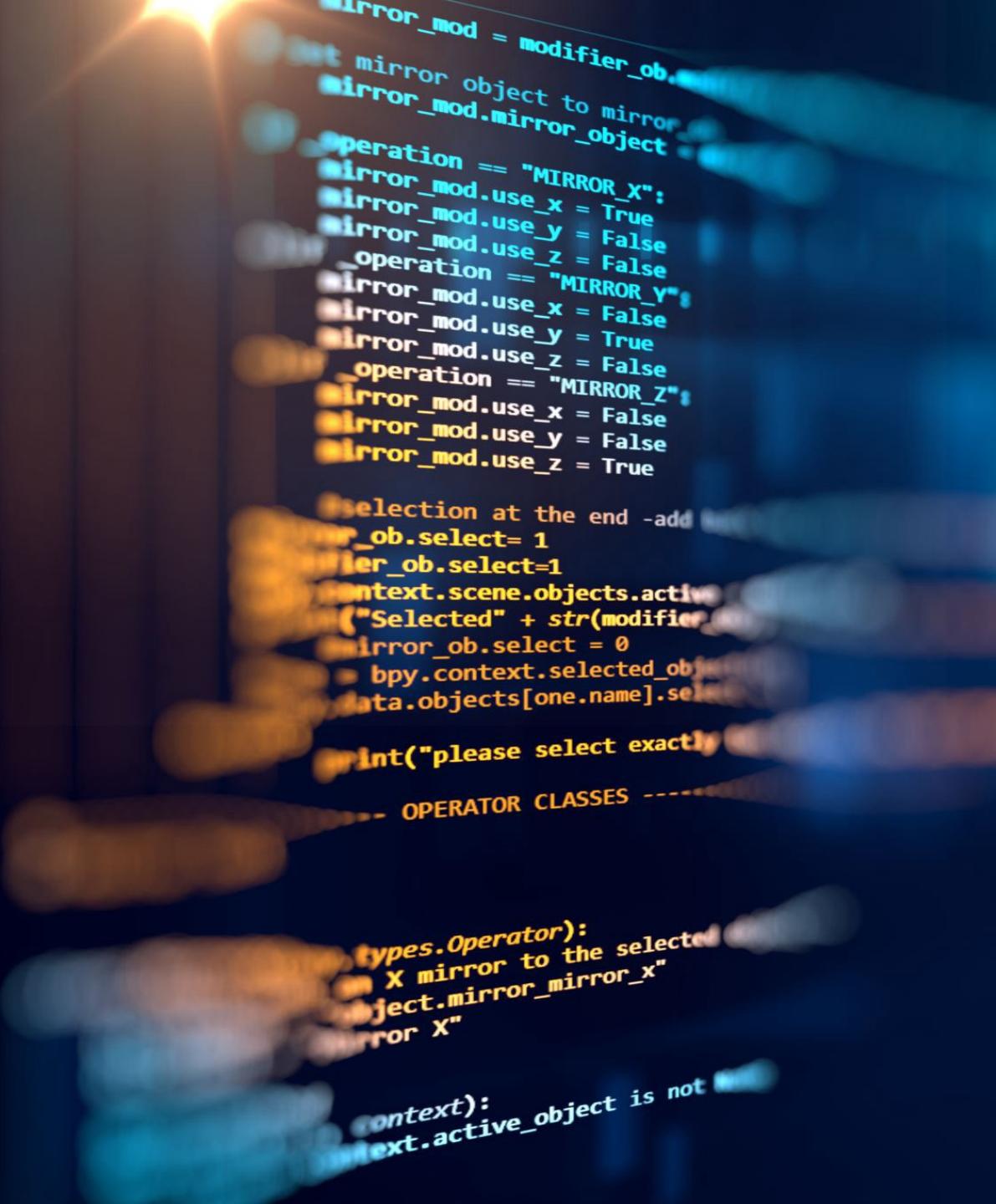
SOFTWARE PROCESSES

Software Development

- The software to meet the requirement must be produced

Software Validation

- The software must be validated to ensure that it does what the customer wants



```
mirror_mod = modifier_obj
# Set mirror object to mirror
mirror_mod.mirror_object = mirror
if operation == "MIRROR_X":
    mirror_mod.use_x = True
    mirror_mod.use_y = False
    mirror_mod.use_z = False
elif operation == "MIRROR_Y":
    mirror_mod.use_x = False
    mirror_mod.use_y = True
    mirror_mod.use_z = False
elif operation == "MIRROR_Z":
    mirror_mod.use_x = False
    mirror_mod.use_y = False
    mirror_mod.use_z = True

# selection at the end - add
# mirror_ob.select= 1
# other_ob.select=1
# context.scene.objects.active = mirror
# ("Selected" + str(modifier))
# mirror_ob.select = 0
# bpy.context.selected_objects.append(mirror)
# data.objects[one.name].select = 1
# print("please select exactly one object")
# print("operator classes")

# - OPERATOR CLASSES ---

# types.Operator:
#     X mirror to the selected object.mirror_mirror_x"
#     mirror X"
#         context):
#             next.active_object is not None
```

SOFTWARE PROCESSES

Software Evolution

The software must evolve to meet changing client needs.

SOFTWARE DEVELOPMENT MODELS



There are numerous software development models



Lets name a few?



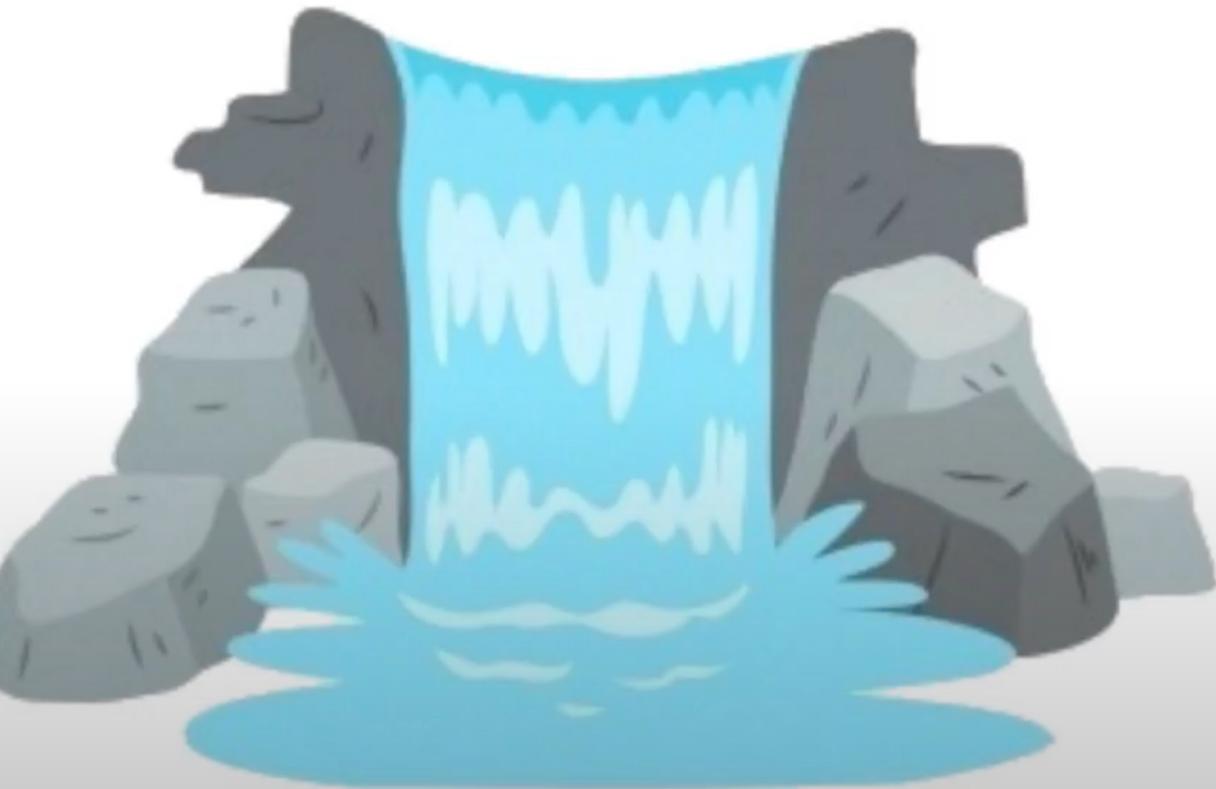
Choosing a software development model depends upon the nature or type of project



Deciding a software development model has a certain **OPPORTUNITY COST**



WATERFALL



REQUIREMENTS

SYSTEM DESIGN

IMPLEMENTATION

TESTING

DEPLOYMENT

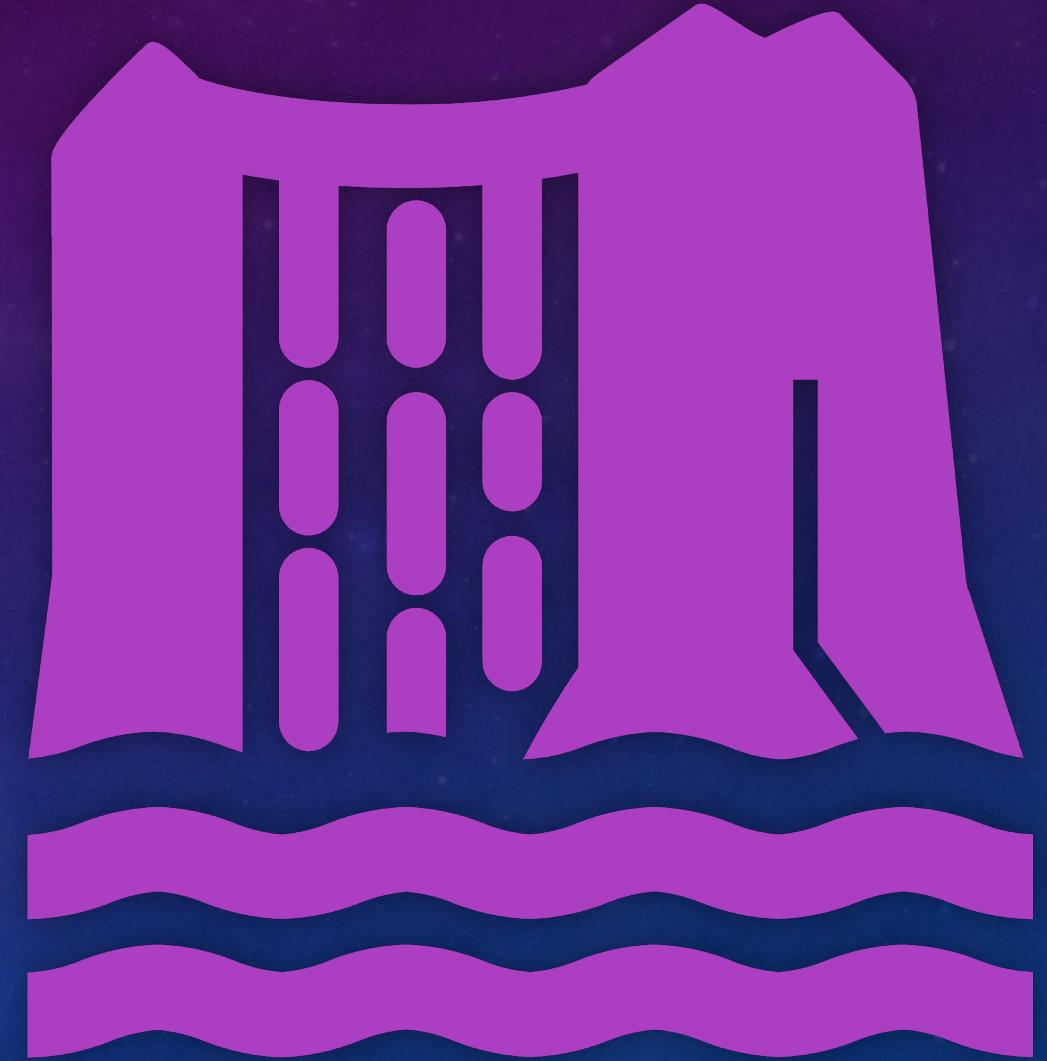
MAINTAINANCE



WATERFALL

1. Step by step
2. Sequential model – That is It works in a sequence
3. Linear Model following top down approach, Just like its name suggests WaterFall
4. Next step won't start, unless current step got completed.
5. Very rigid
6. Changes couldn't be brought easily when required
7. Emphasis on following Processes and Tools
8. Extensive Documentation needed
9. Customer wont get to see the product unless the time of UAT.
10. Extensive Planning

WHEN TO USE WATERFALL?





WHEN TO USE WATERFALL

Where can we use waterfall?

1. When the scope is fixed
 - No changes required
 - Because changes are costly
 - Need time
2. When customer involvement is least
3. Project is Relatively simple and you have done it many times before
4. Requirements are Static – Customers know well in advance what they want



RECAP

Software Process

Requirement Elicitation

What is waterfall

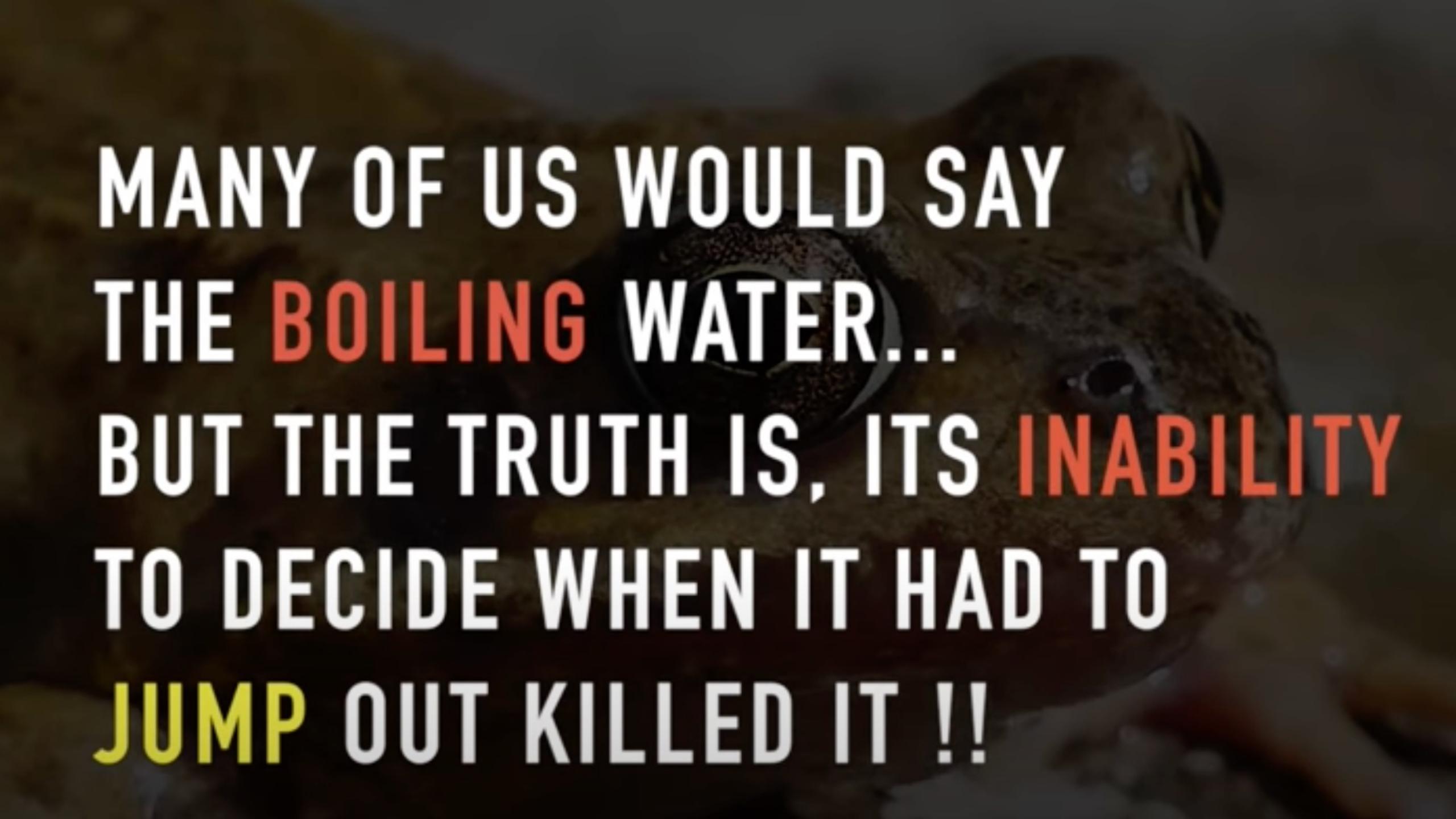
Where to use waterfall

Boling Frog Syndrome

A) THE BOILING FROG SYNDROME



DON'T
DO THIS AT
HOME
(or anywhere)



MANY OF US WOULD SAY
THE BOILING WATER...
BUT THE TRUTH IS, ITS INABILITY
TO DECIDE WHEN IT HAD TO
JUMP OUT KILLED IT !!