
Welcome!
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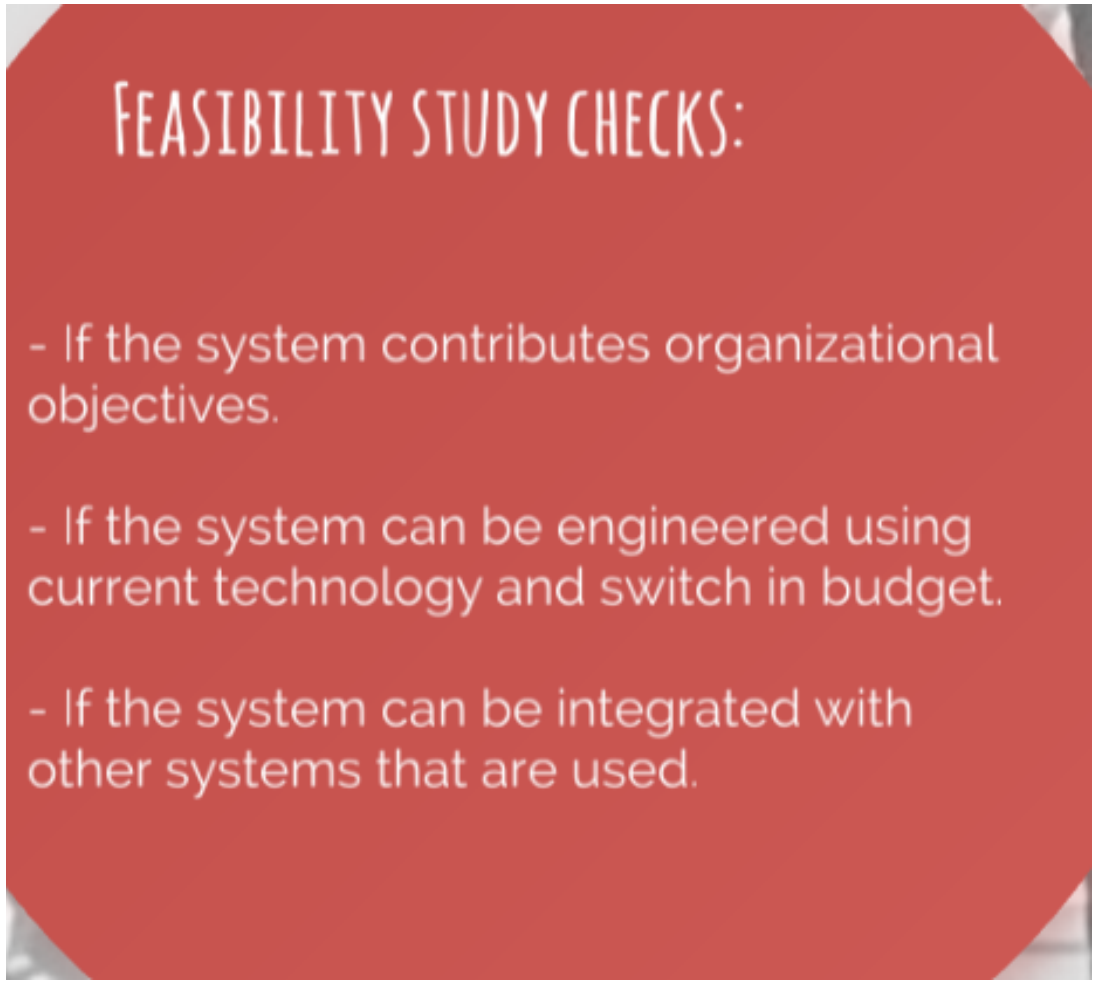
Books:

1. Software Engineering textbook - Ian Sommerville, 9th Edition. (TEXT BOOK)

2. Software Engineering: A Practitioner's Approach by Roger S. Pressman, latest edition. (Reference book)

0. FEASIBILITY STUDY

A feasibility study is quite important phase in which high management decides on the feasibility report that whether or not the proposed system is worthwhile.


FEASIBILITY STUDY CHECKS:
- If the system contributes organizational objectives.
- If the system can be engineered using current technology and switch in budget.
- If the system can be integrated with other systems that are used.

Feasibility study leads to a decision:

- Go Ahead
- Do Not Go Ahead
- Think again

Outcome :

FSR (Feasibility Study Report)

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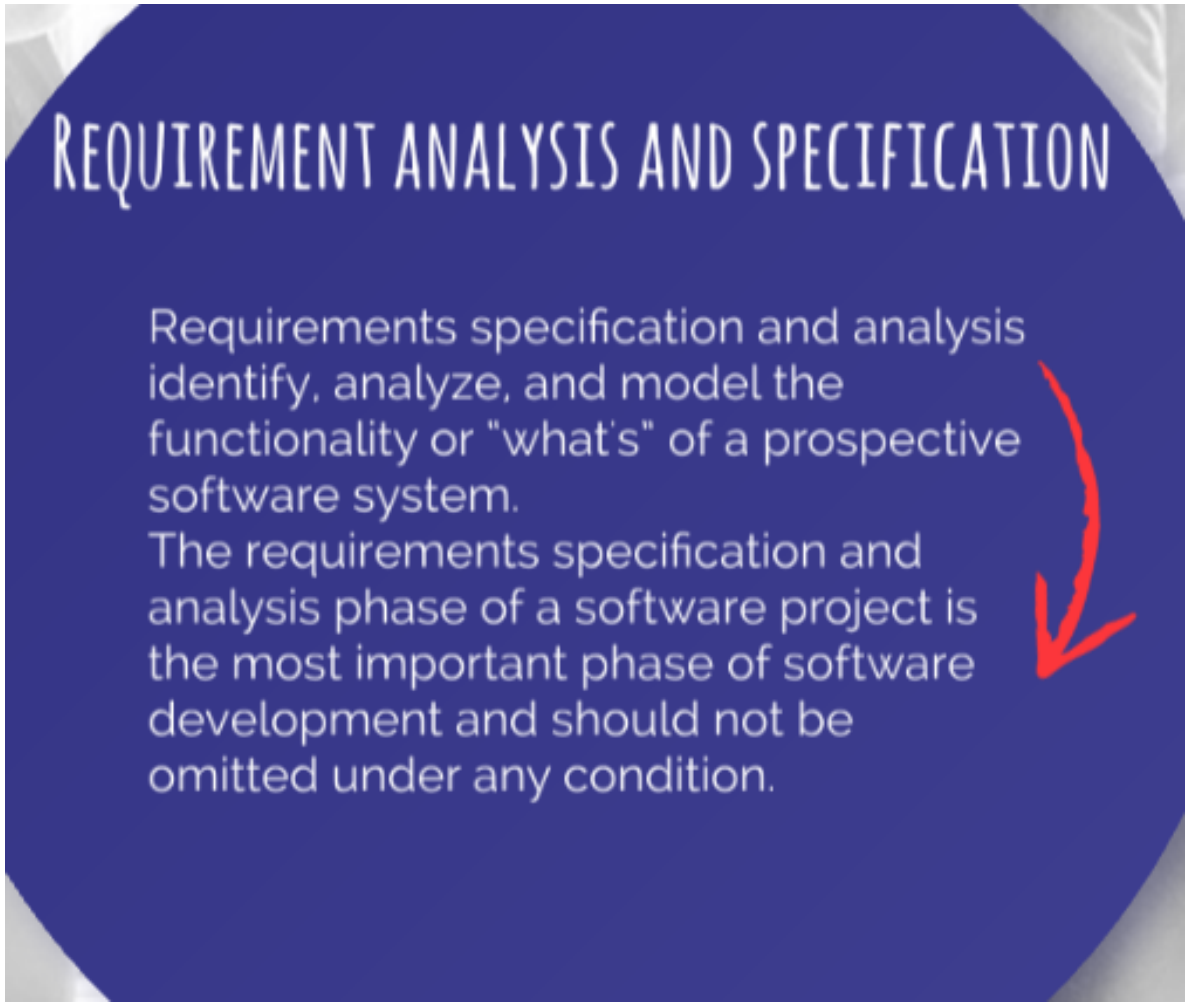
Phase 1:



Software Requirement Specifications

The result of this phase is the software requirements specifications document or the SRS.

It serves as the starting point for the next phase of software development, namely, software design.

Phase 2:

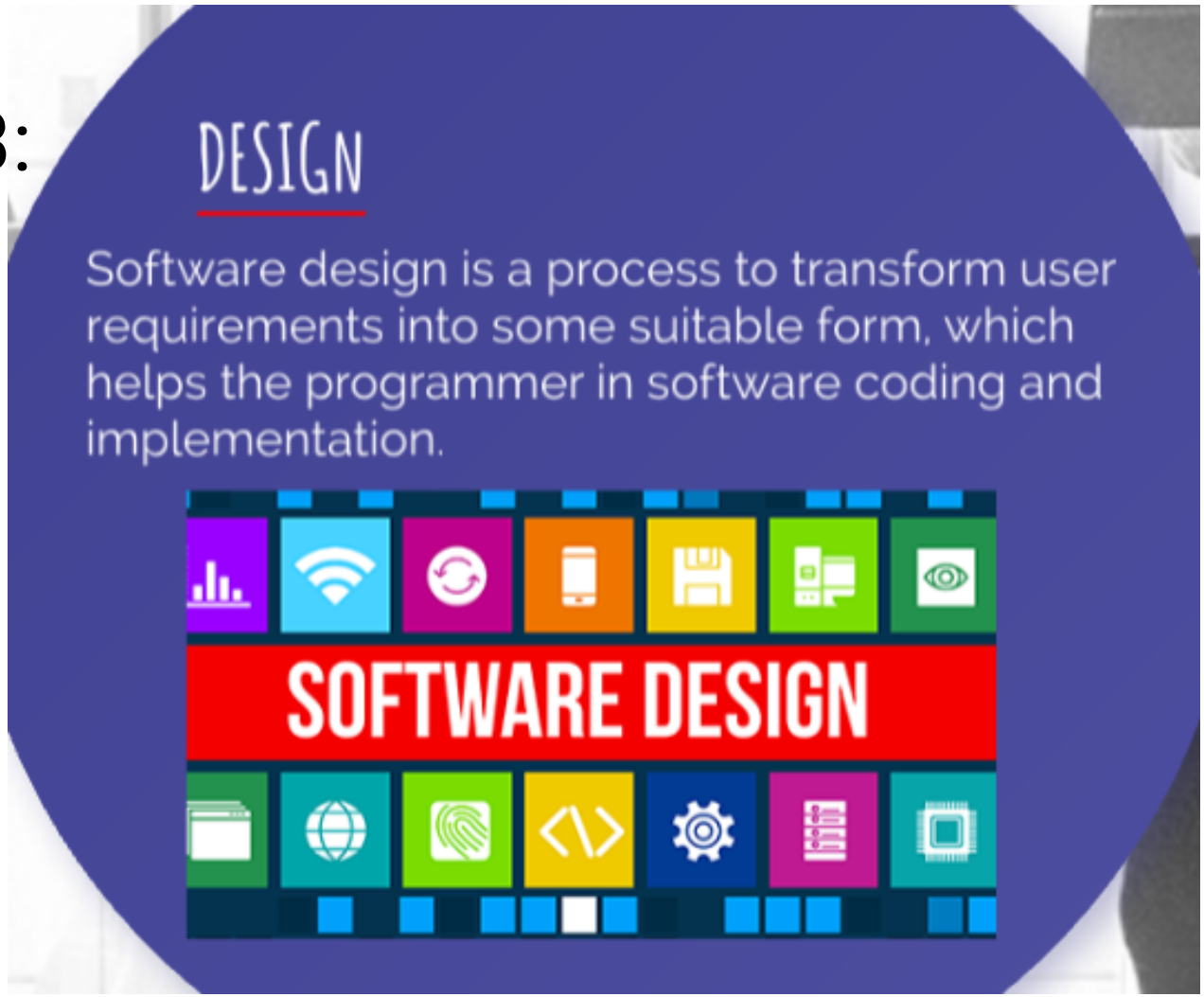

PLANNING
Software project planning is task, which is performed before the production of software actually starts.
it involves:
1. Set a deadline
2. Cost Evaluation
3. Assign Tasks.

Project plan

1. Scope Management
2. Project Estimation
3. Project Scheduling
4. Resource management

ect.

Phase 3:


DESIGN
Software design is a process to transform user requirements into some suitable form, which helps the programmer in software coding and implementation.
SOFTWARE DESIGN

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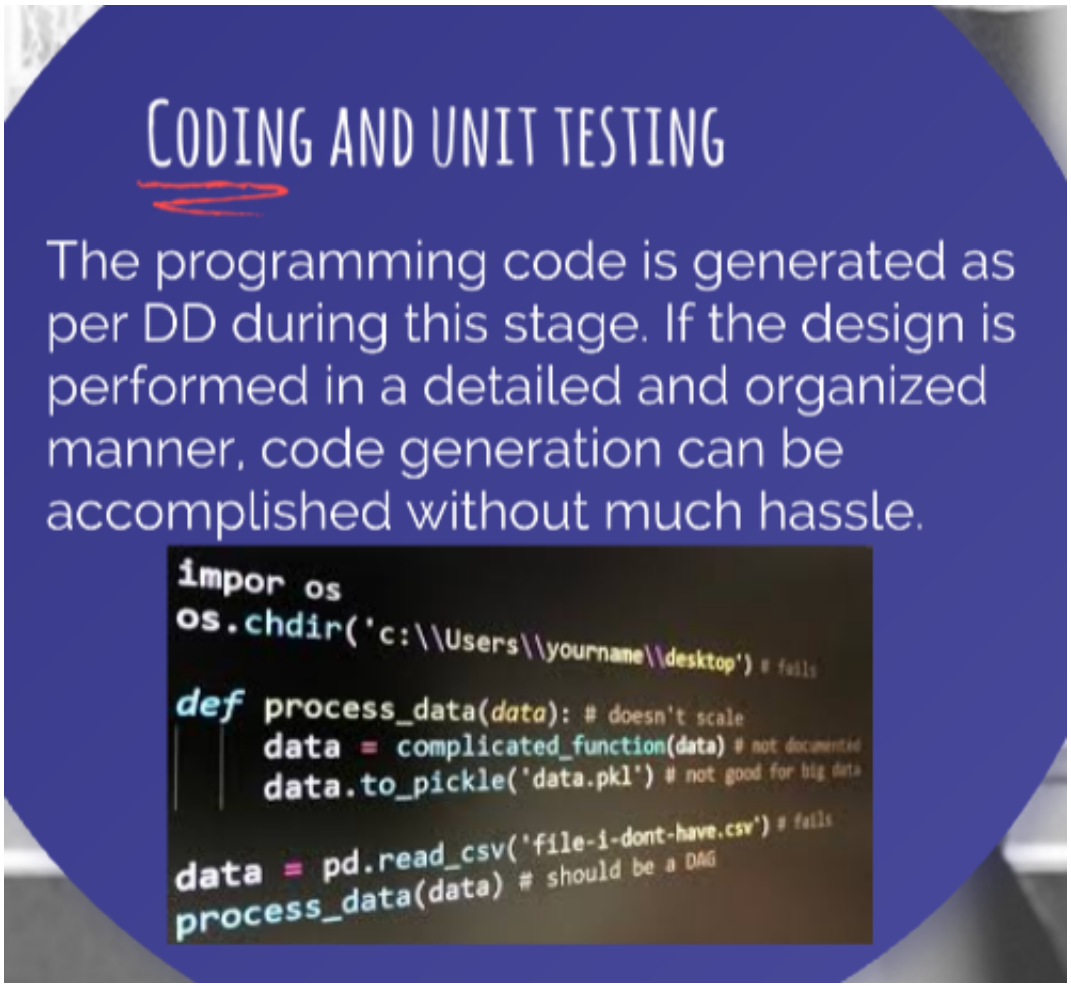
DESIGN DOCUMENT

moves the concentration from problem domain to solution domain. It tries to specify how to fulfill the requirements mentioned in SRS.

Phase 4:


CODING AND UNIT TESTING
The programming code is generated as per DD during this stage. If the design is performed in a detailed and organized manner, code generation can be accomplished without much hassle.
impor os
os.chdir('c:\\Users\\yourname\\desktop') # fails
def process_data(data): # doesn't scale
data = complicated_function(data) # not documented
data.to_pickle('data.pkl') # not good for big data
data = pd.read_csv('file-i-dont-have.csv') # fails
process_data(data) # should be a DAG

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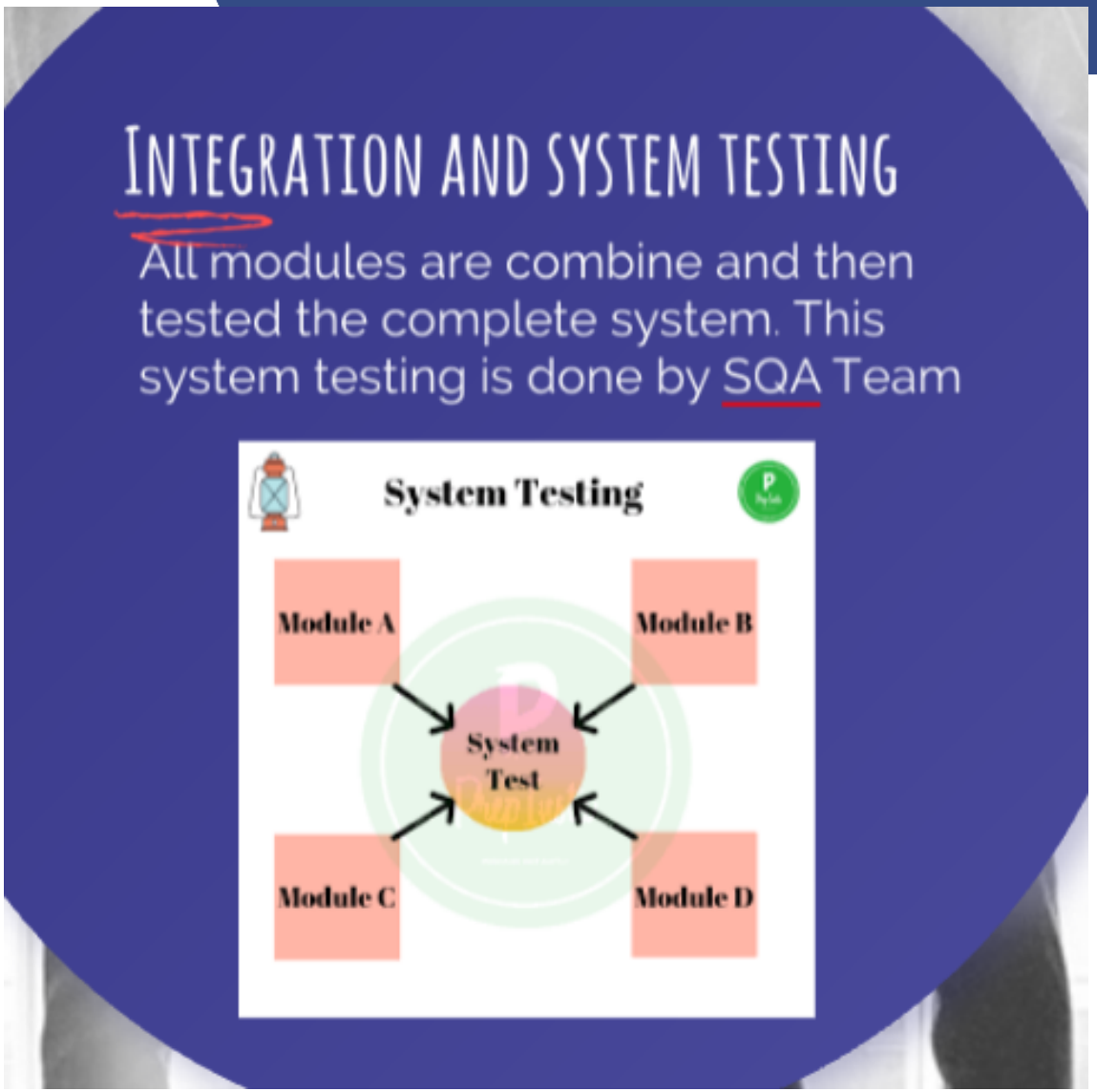
Phase 5:



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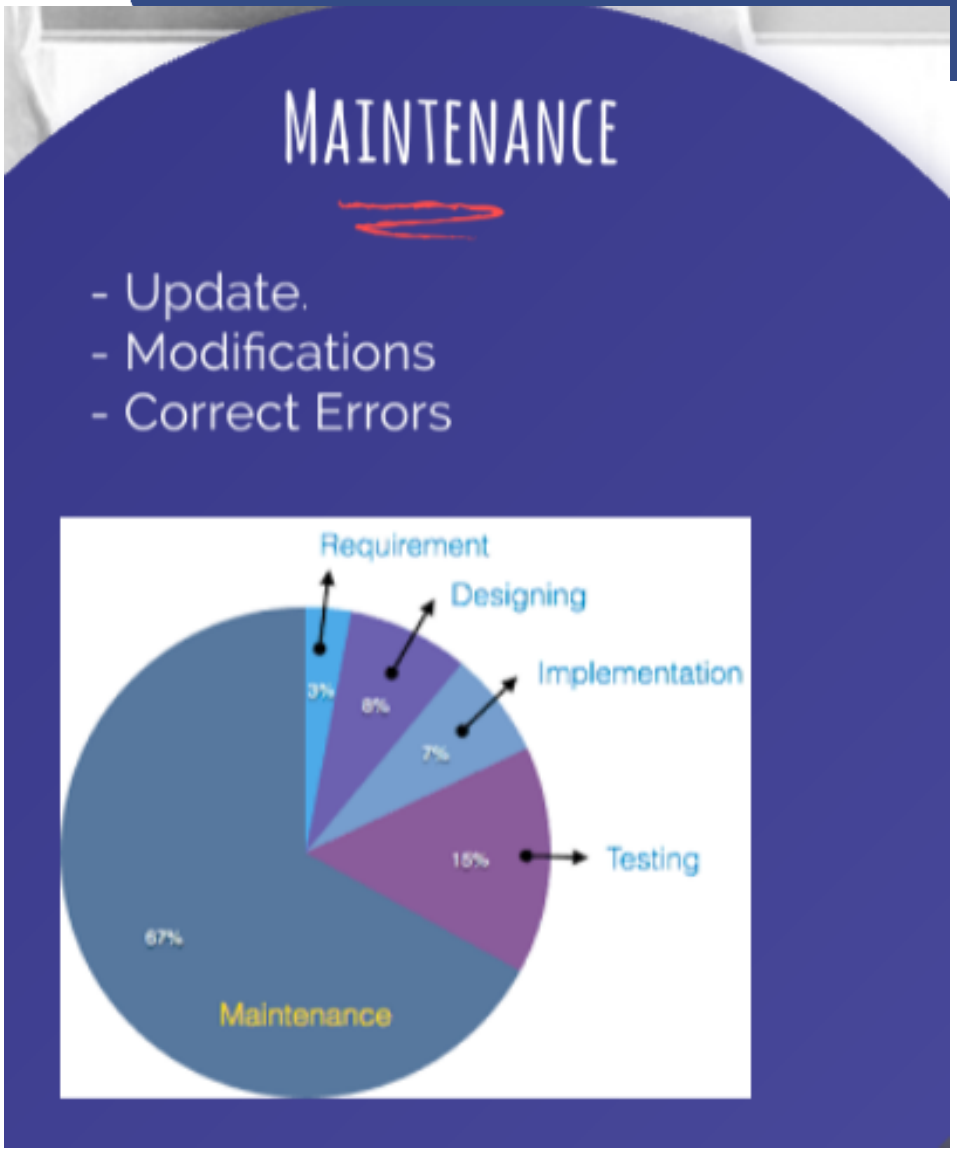
Phase 6:



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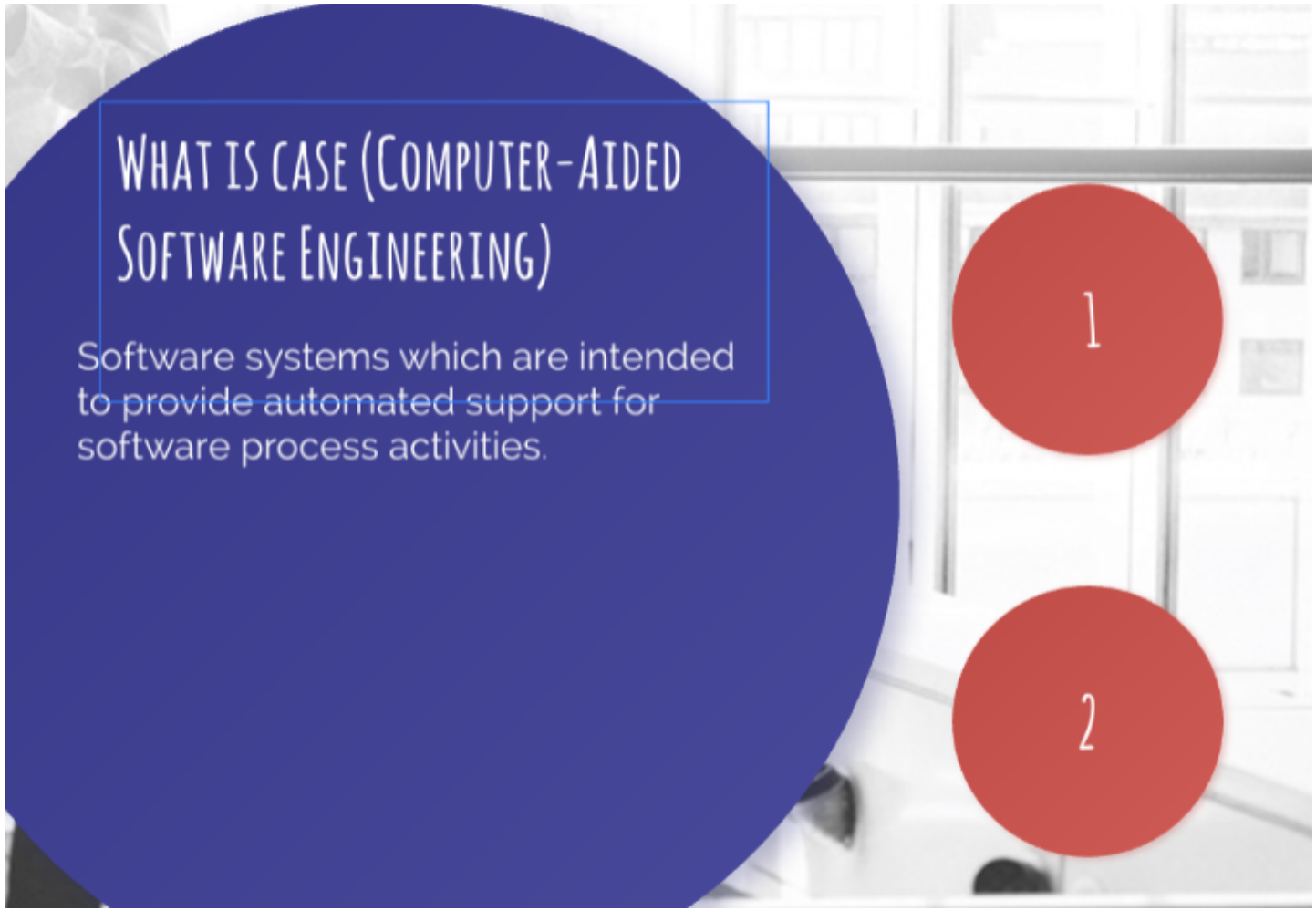
Phase 7:

RETIREMENT

the time when the software become obsolete.
example:
when we want to change the platform.


What is case (Computer-Aided Software Engineering)
Software systems which are intended to provide automated support for software process activities.
1
2

UPPER CASE TOOLS

Use in Phase 1, Phase 2 and Phase 3 examples:

1. Microsoft Project.
2. Rational Rose.

etc

LOWER CASE TOOLS

Use in Phase 4-7
examples:

1. Visual Studio.
2. code generator.
   etc


Thank you
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