

Software Engineering

23mx21

Software Engineering

Agenda

- ✓ **What is Software Engineering?**
- ✓ **Objectives of Software Engineering**
- ✓ **How to achieve these objectives?**
- ✓ **What is a best practice?**
- ✓ **Why students need best practices?**
- ✓ **What is practiced by students now?**
- ✓ **Good Practices for students**
- ✓ **Benefits & Questions**

What is Software Engineering?

“The intelligent application of proven principles, techniques, languages, and tools to the cost-effective creation and maintenance of software that satisfies users’ needs.”

What is Software Engineering?

“Method of building a Software in the way one builds Bridges and Houses, starting from a Theoretical Basis and using Sound and Proven Design and Construction Techniques as in other Engineering Disciplines ”

What is Software Engineering?

“Methodology, a well defined body of knowledge and techniques, which is used in developing and Maintaining Software”

What is Software Engineering?

“It is the Establishment and use of Sound Engineering Principles in order to obtain Economically Software that is really Reliable and works Efficiently in all real machines.

What is Software Engineering?

**“It is the Systematic Approach
to the Development, Operation
and Maintenance of Software”**

Objectives

Producing
High Quality Software
at
Low Cost

How to achieve these objectives?

Use best practices in the software development

What is a Best Practice ?

“It is a principle, technique, or rule about Software development that is applicable regardless of the development methodology, language, or application domain”

Why students need best practices ?

To have a good correlation
between Academic & Industry
practices

To become a readymade Product to
industries

What is practiced by students now ?

Not following any of the SDLC models

Always Coding

Program without having good interface

No deadlines pressure

Not following any standards for writing code

Less importance for good design

Not following a proper testing process

No documentation for any of their work

Good practices for students

Following are the practices recommended to students

Best Practice - 1

**Follow a Software Development
Life Cycle Model**

Best Practice - 2

**Follow 40:20:40 / 60:15:25 -
Software Development Rule**

Best Practice - 3

Spend enough time
to
understand the given
problem thoroughly before
writing code

Draw picture (s) to get a complete
understanding

“ If you define the problem correctly,
you almost have the solution.



Steve Jobs

Best Practice - 4

Choose the best feasible solution to code

Best Practice - 5

**Model the solution
in the
observation note book**

Record everything

Best Practice - 6

**Write enough number of
Test Cases before coding**

Best Practice - 7

Write Code following
standards

Test the code thoroughly

Best Practice - 8

Provide Good Interface

Best Practice - 9

Inspect the results of each test completely

Do not plan tests assuming that no errors will be found

Best Practice - 10

**Document the test cases and
the results**

**Chance to enhance the
program -
Try out !**

Best Practice - 11

Demonstrate the code
with full confidence

Get the feedback / views
from the faculty

Best Practice - 12 & 13

Learn all the subjects
thoroughly

Update
Current Trends and
Technology

Benefits

You will become a
readymade product to
Industry

Questions

