

# Software Engineering

## Course Contract 😊

---

**Dr. Fatma ElSayed**

Computer Science Department  
fatma.elsayed@fci.bu.edu.eg

# Expectations?

---



# Where Can You Find Software?

Some popular ones...

The screenshot shows a YouTube video player interface. At the top, the YouTube logo and navigation links are visible. The video title is "If programmers have make a plane". The video player shows a scene from a movie with a character in a cockpit. To the right of the video player, there is a user profile for "DikiyKaban" with a "Suscribir" button. Below the profile, there are sections for "Más de: DikiyKaban" and "Videos relacionados" with video thumbnails for "Robot Fish", "Cracking Wireless Networks", and "Real Transformer".

The screenshot shows the Facebook sign-up page. The top navigation bar includes the Facebook logo, a "Remember Me" checkbox, a "Forgot your password?" link, and "Email" and "Password" input fields with a "Login" button. The main content area features the text "Facebook helps you connect and share with the people in your life." and a "Sign Up" section with the text "It's free and anyone can join". The sign-up form includes fields for "Full Name", "Your Email", and "New Password", along with dropdown menus for "I am:", "Select Sex:", "Month:", "Day:", and "Year:". A "Sign Up" button is at the bottom of the form. A world map with location pins is also visible.

The screenshot shows the Google Colombia search page. The Google logo is prominently displayed in its multi-colored font. Below the logo is a search input field with a "Buscar con Google" button and a "Voy a tener suerte" button. To the right of the search field are links for "Búsqueda avanzada", "Preferencias", and "Herramientas del idioma". Below the search field, there are radio buttons for "la Web", "páginas en español", and "páginas de Colombia".

[Programas de publicidad](#) - [Soluciones Empresariales](#) - [Todo acerca de Google](#) - [Google.com in English](#)

©2009 - [Privacidad](#)

# Where Can You Find Software?

---

And even in ...



# Conclusion

---

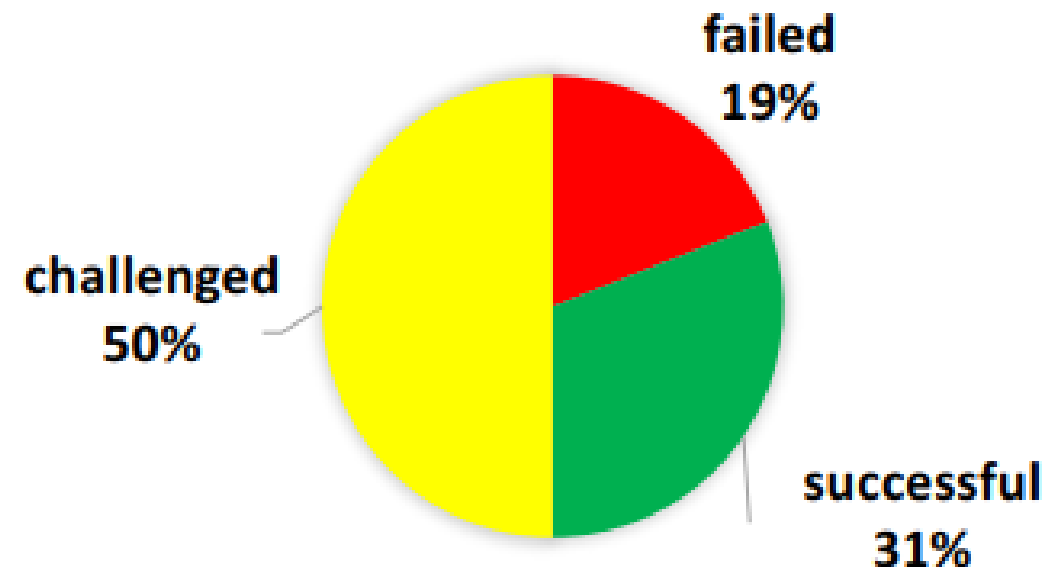
Software is everywhere and our society is now totally dependent on software-intensive systems.

# Project Success

---

The Standish group has been publishing reports on the success of software projects since 1994. In its report (2020) it defines:

- Only **31%** of all projects were being delivered on time, on budget, with the required features and functions.
- .. **50%** were late, or over budget, or not delivering all the required features.
- .. **19%** were either canceled before delivery or delivered but never used.



# Common issues

---

- Poor, or lack of, user involvement.
- Lack of clear business objectives.
- Under and over building –not building all the required features and building features that are never used.
- Bad documentation.

# Common issues

---

- Programming is NOT enough!

It is not enough to do your best: you must  
Know what to do, and THEN do your best.

-- *William Edwards*

And since...

A clever person solves a problem.

A wise person avoids it.

- *Albert Einstein*



# Solution: Software Engineering

---

## What is it?

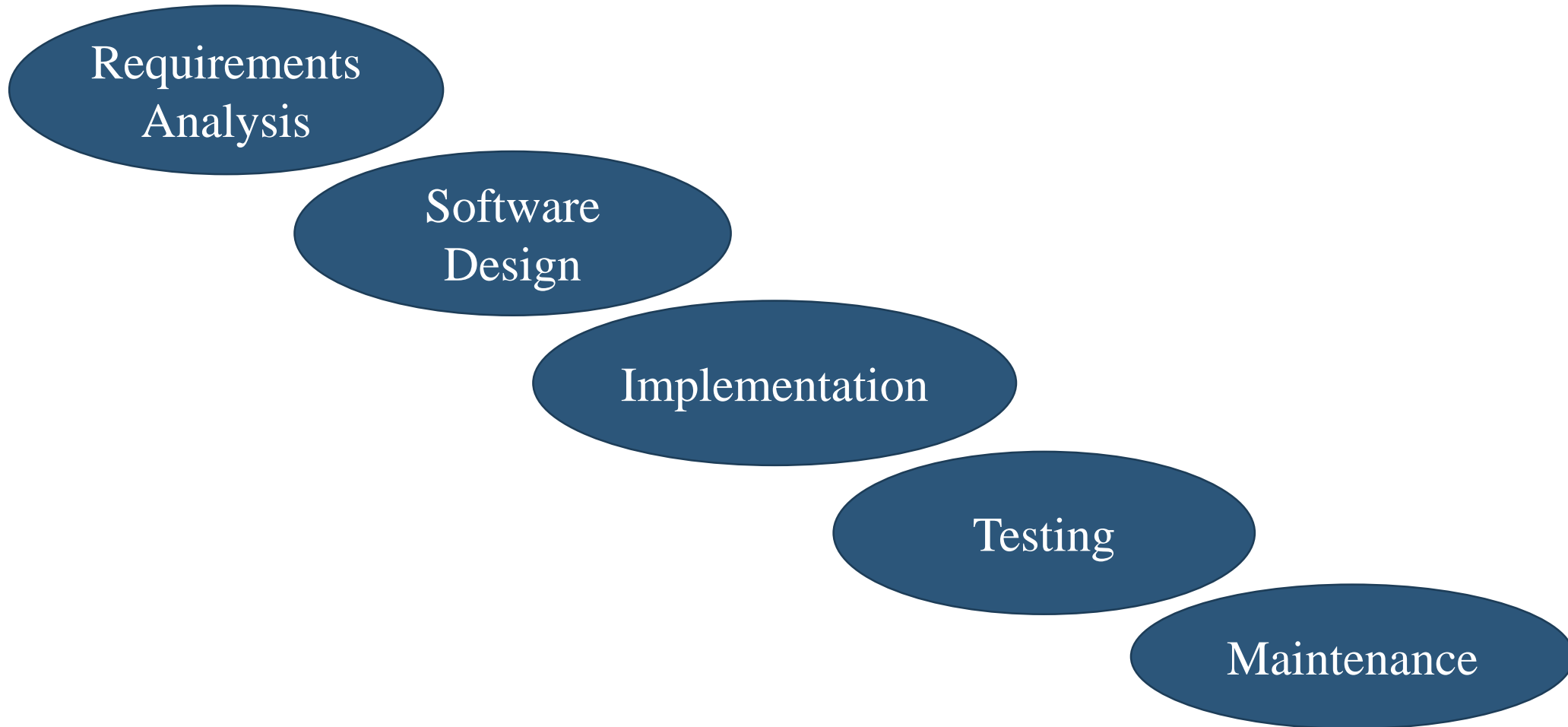
**In simple terms,** is the study and application of methodologies to develop quality software that fulfill customer needs. 😊

# Software Engineering



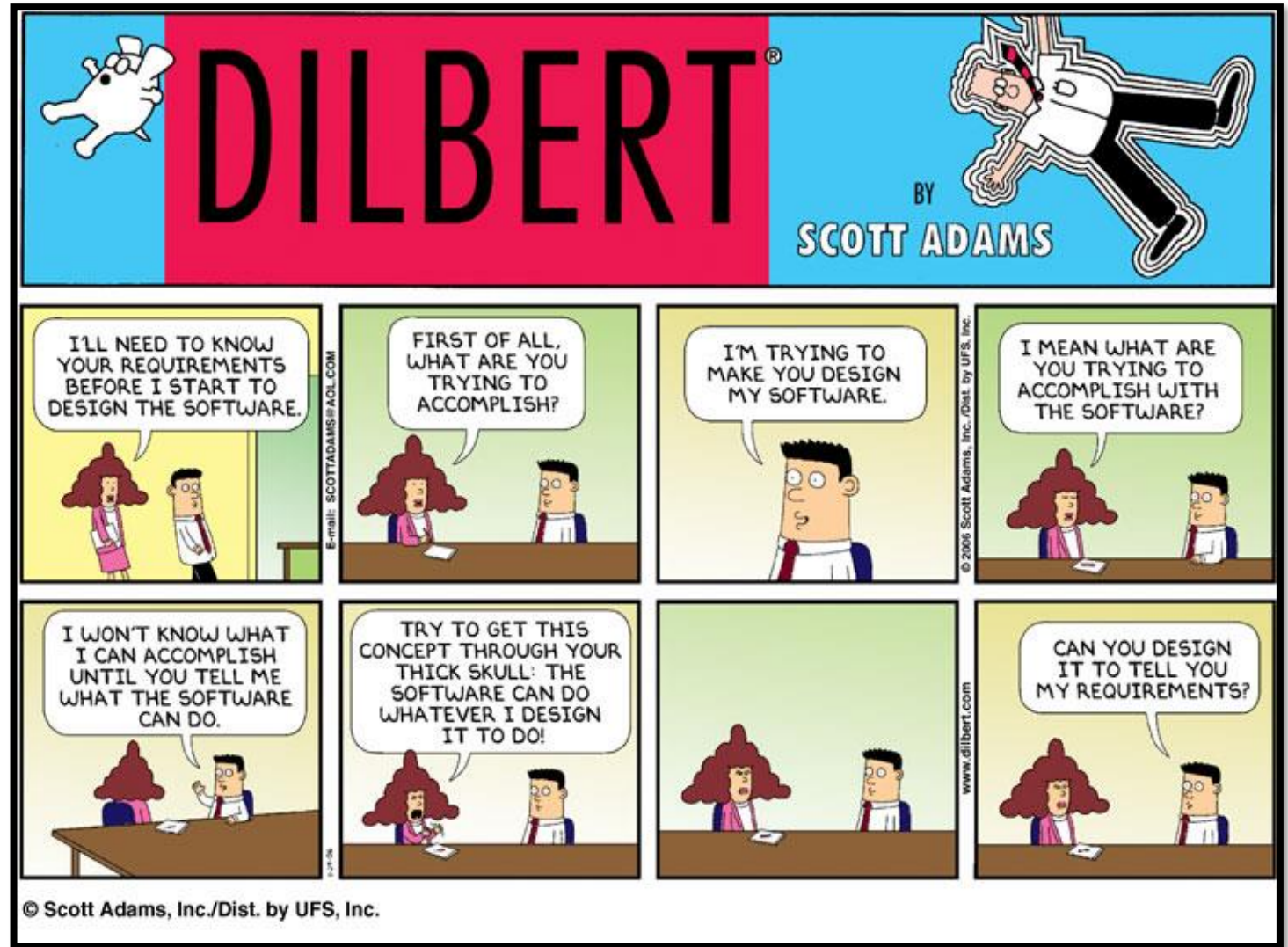
# Phases for Software Development

---



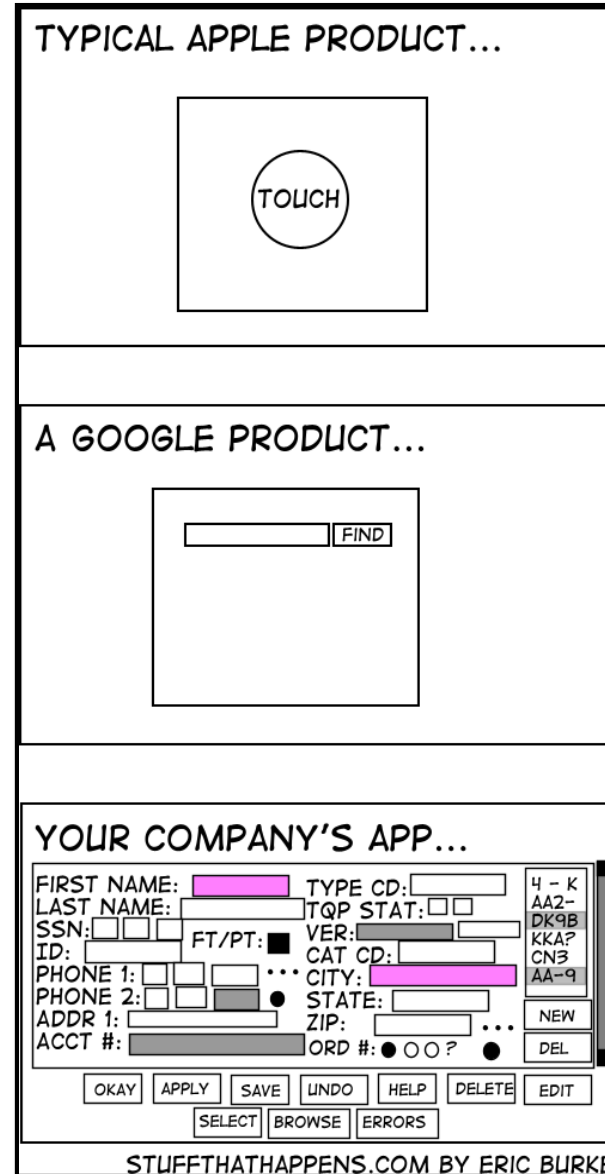
# Requirement Analysis

Find out what the client want the software to do

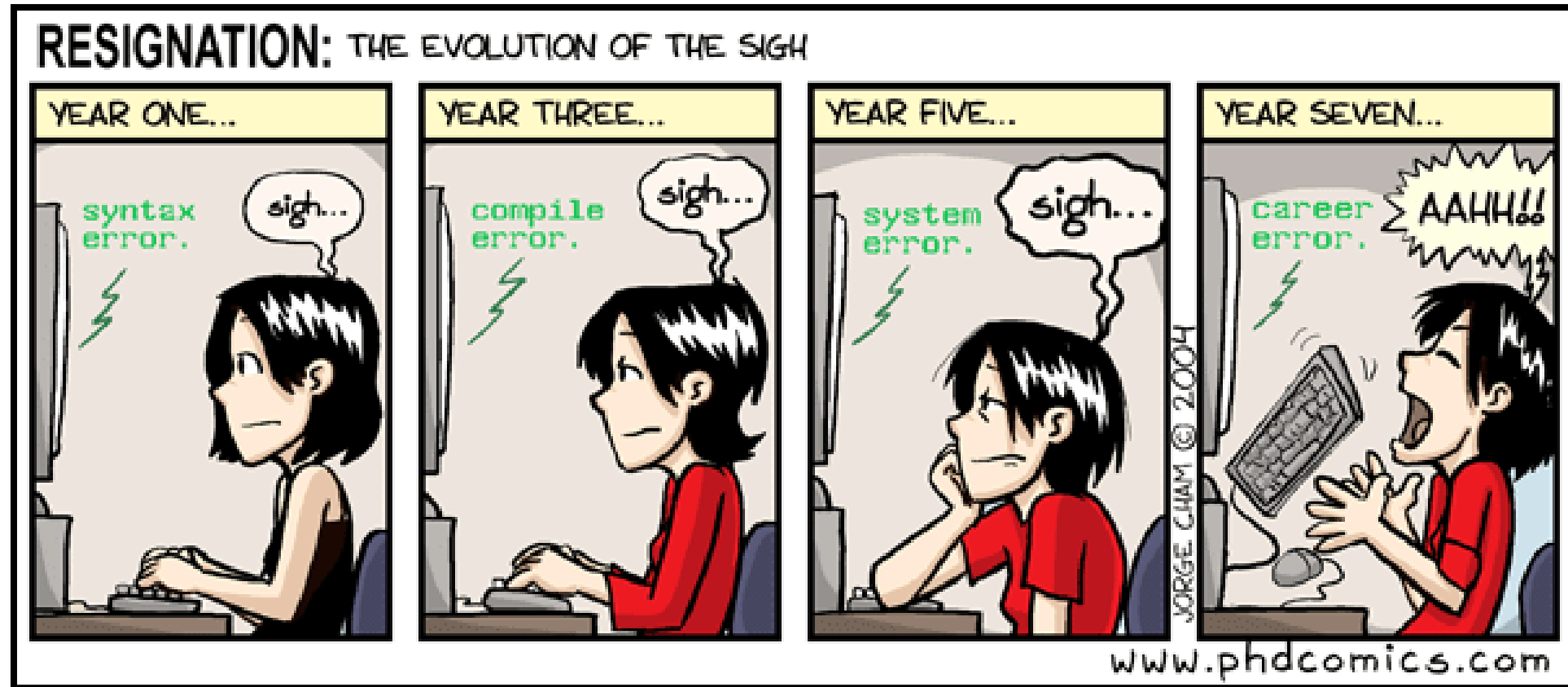


# Design

## Planning the software solution



# Implementation



Code!!!

# Testing



Executing the application trying to find software bugs

# Maintenance

---

Any software engineering activity oriented to change an existing software product or to improve or plan for future changes.



# Course Information

---

# Course Information

---

## Course Hours

➤ Lecture:	Tuesday 1:30 pm to 3:00 pm (Lecture Hall 4)	<b>CS (G1:G5)</b>
	Tuesday 3:00 pm to 4:30 pm (Lecture Hall 4)	<b>CS (G6:G7) and AI</b>
	Wednesday 12:00 pm to 1:30 pm (Lecture Hall 5)	<b>SC</b>
	Wednesday 1:30 pm to 3:00 pm (Lecture Hall 5)	<b>IS</b>

➤ Office Hours: Tuesday 10:00 to 12:00  
(at my office: Third Floor- room 341 in front of lab 11 )

**OR** send your Complaint via Complaint Form

link: <https://forms.gle/1eFLcd9CrwiDHUW87>

# Course Information

---

## Materials

- All materials will be available at my BU page  
link: <https://bu.edu.eg/staff/fatmaelsayed14>
- I need the admin to contact me for any further announcements.

# Course Information

**Benha University** Staff Search: [Go](#) Welcome: **Fatma El-Sayed Ibrahim Ali** ([Log](#))

You are in: [Home](#)  
**Ass. Lect. Fatma El-Sayed Ibrahim Ali**

**Academic Position:** Asst. Lecturer  
**Current Administrative Position:**  
**Ex-Administrative Position:**  
**Faculty:** **Computers and Artificial Intelligence**  
**Department:** Computer Science  
**Edu-Mail:** fatma.elsayed@fci.bu.edu.eg  
**Alternative Email:** ros2\_2007@yahoo.com  
**Mobile:** Not Available  
**Scientific Name:** \*\*\*\*\*  
**Publications [ Titles(5) :: Papers(4) :: Abstracts(4) ]**  
**Courses Files( 0 )**  
**Inlinks: (0)**  
**External links: (0)**  
**News(edit)**

**Benha University**  
[Home](#)  
[التسعة العربية](#)  
[My C.V.](#)  
[About](#)  
**[Courses](#)**  
[Publications](#)  
[Inlinks\(Competition\)](#)  
[Theses](#)  
[Reports](#)  
[Published books](#)  
[Workshops / Conferences](#)  
[Supervised PhD](#)  
[Supervised MSc](#)

[Google](#)  
[Benha University](#)  
[RG](#)  
[in](#)  
[f](#)  
[Twitter](#)  
[g+](#)  
[YouTube](#)  
[WordPress](#)  
[Instagram](#)  
[Facebook](#)

# Course Information



**Benha University** Staff Search:  **Go** Welcome: Fatma El-Sayed Ibrahim

You are in: [Home](#) / [Courses](#) [add mode](#) | [view mode](#)

**Ass. Lect. Fatma El-Sayed Ibrahim Ali :: Courses Details:**

**Number of courses : 1**

**Number of uploaded files for these courses from students : 0**

**Software Engineering**

Files(-)	URL(-)	Assignments(-)	Exam(-)	
				  

- [Benha University](#)
- [Home](#)
- [النسخة العربية](#)
- [My C.V.](#)
- [About](#)
- [Courses](#)
- [Publications](#)
- [Inlinks\(Competition\)](#)

# Course Information

---

## Grade Distribution\*

- Total Grade	100
– Final Exam	50
– Year’s Work	50
- Year’s Work:	
– Mid-Term Exam	15
– Labs	15
– Oral	10
– Quizzes	10

# Course Information

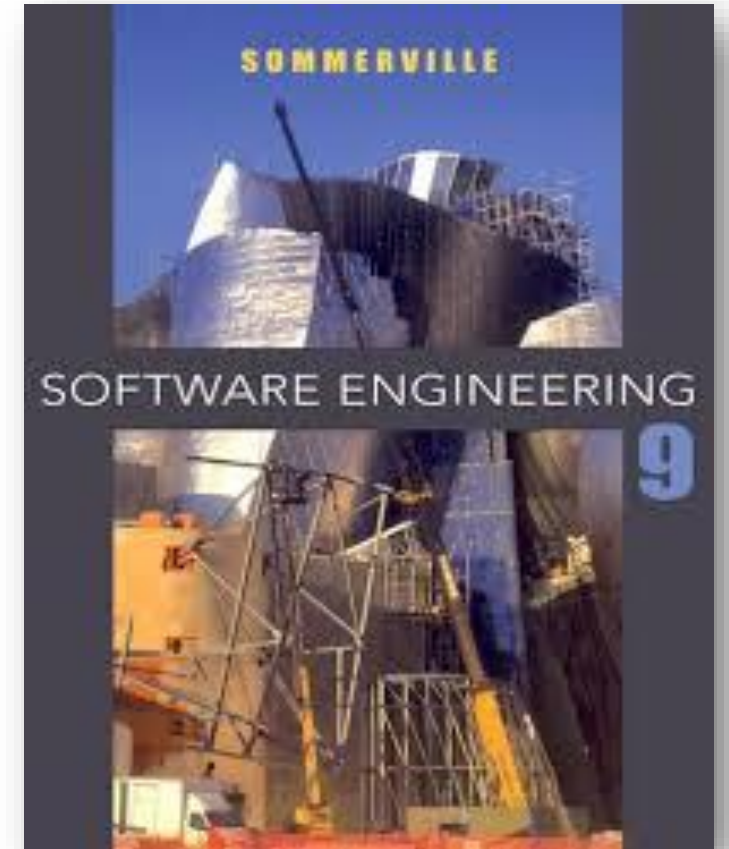
---

## Resources

- Lecture Notes

- Text Book

Ian Sommerville, “Software Engineering”,  
9th Edition, Addison Wesley.



# Course Information

## Contents \*

Week	Lecture	Date	Topic	Oral
1	L0	1-Oct	Course Contract	
2	L1	8-Oct	Introduction to Software Engineering	
3	L2	15-Oct	Software Processes	
4	L3	22-Oct	Requirements Engineering	
5	L4	29-Oct	System Design & Modelling	
6	L5	5-Nov	System Design & Modelling	Group #1 (L2, 3, 4)
7	Mid	12-Nov	Midterm Break	
8	L6	19-Nov	System Architecture	
9	L7	26-Nov	Software Testing Strategies	
10	L8	3-Dec	Software Testing Techniques	Group #2 (L5, 6, 7)
11	L9	10-Dec	Technical Metrics for Software	



# Finally...

**RULES**

“من غشّنا فليس منا”

Cheating and copying is never ok ☹️

**Who will be caught cheating?**

- “Zero” score in that exam
- “Publish” his name with the grade



# **NEXT: Introduction To Software Engineering**

---



# THANK YOU

---