

# Introduction to Programming

## 9th Weekly Note (E17, Week 45)

### Reading for Week 45

- **Obligatory:** Sections 3.8, 6.1, 6.3, 6.4.2–6.4.3, 6.5.1–6.5.2, 6.5.4, 6.6.1, 6.6.4, 7.1, 7.3.1–7.3.2, 7.5, 10.1, 10.2.1–10.2.3, 10.3.1, 10.5.1–10.5.2 of “Introduction to Programming Using Java”
- *Supplementary:* Chapters 13 and 14 of “Think Java”

### Lecture: Monday, November 6, 12-14 (U140)

In this lecture we will first learn how to create event-driven user interfaces in Java using the Swing GUI framework.

Then we will learn how to create simple Android apps from scratch.

### Lecture: Thursday, November 9, 14-16 (U140)

This lecture introduces abstract data types, collection classes, in particular ArrayLists, and generic typing.

### Labs: see detailed schedule on course home page

- **Obligatory:** Exercises 5.1 from Chapter 5.  
Write a small Swing GUI or Android app that allows the user to enter two numbers a and b and has a button to compute the and show the length of the hypotenuse c using good ol' Pythagoras.
- *Supplementary:* Exercises 6.8 from Chapter 4. Implement both the Swing GUI and the Android app from the Obligatory part.
- **Challenge:** Implement a classic arcade game such as Breakout, Pong, Tetris, Snake or ... using either a Swing GUI or an Android app.