

# Mobile Application Development

Introduction & Class Info

<http://mobdev.ce.unipr.it/2013/>

# About us

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office: Pal.2 Room 2/4

*Our research interests:*

- *Internet of Things and Smart Cities*
- *Peer-to-peer networks*
- *Mobile Application Development*
- *Security*

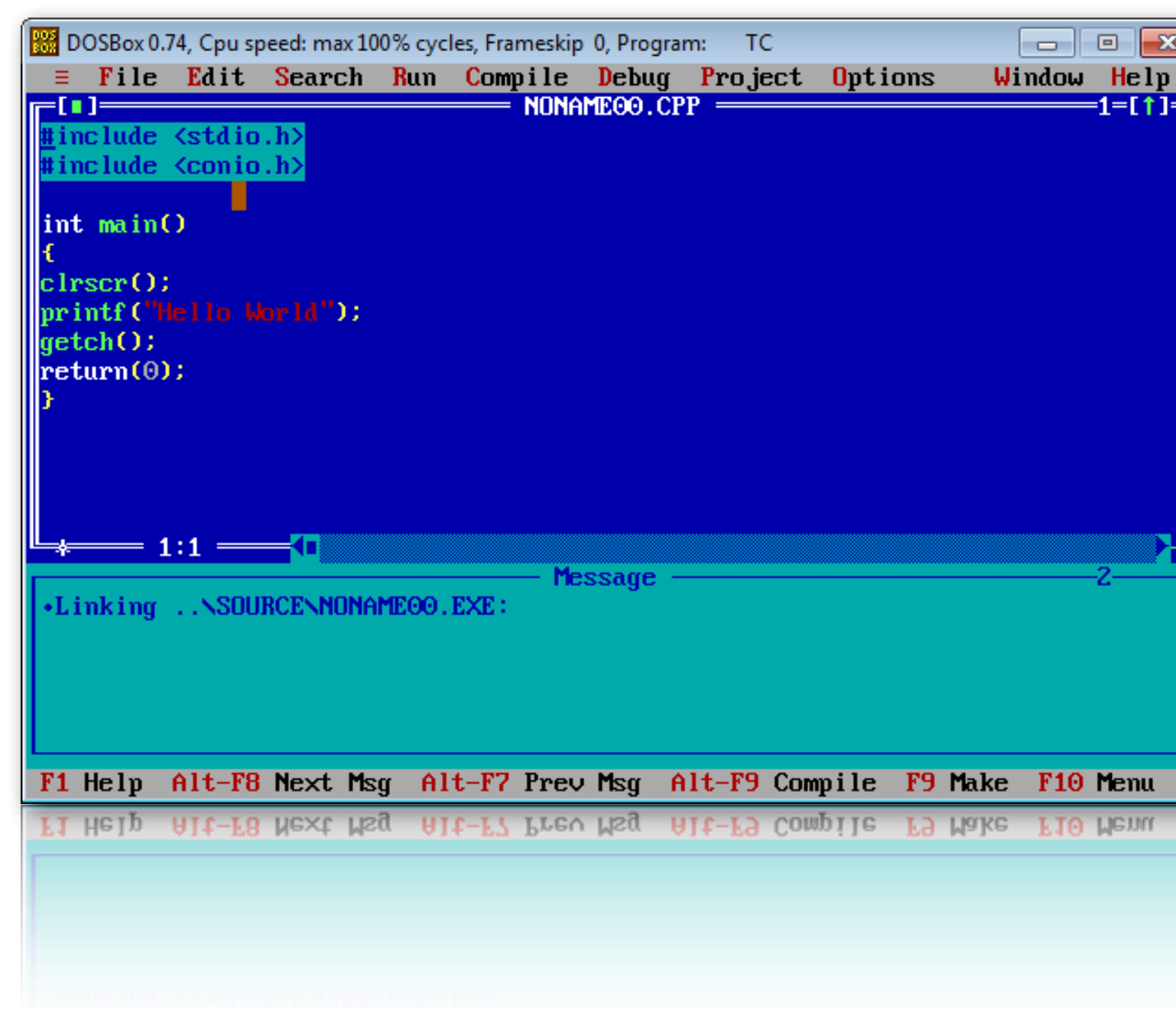
# What this class is about

- Mobile Application Development for
  - Android platform (Java)
  - iOS platform, i.e. iPhone, iPod, iPad (Objective-C)
  - Cross-platform (web-based, i.e. HTML5/CSS3/JS, technologies)
- Best practices for the design and implementation of mobile applications
- Tools for developing Android and iOS applications (Eclipse, XCode, ...)
- Android and iOS platform core concepts and frameworks
- Enhance programming skills by developing mobile applications
- Earn experience in mobile application deployment and testing phases



# What this class is not about

- This class will not teach the basics of programming
- Not a Java and Objective-C language class
- Not a shortcut to by-pass Apple's regulations for AppStore submission :)



```
DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC
File Edit Search Run Compile Debug Project Options Window Help
NONAME00.CPP
#include <stdio.h>
#include <conio.h>

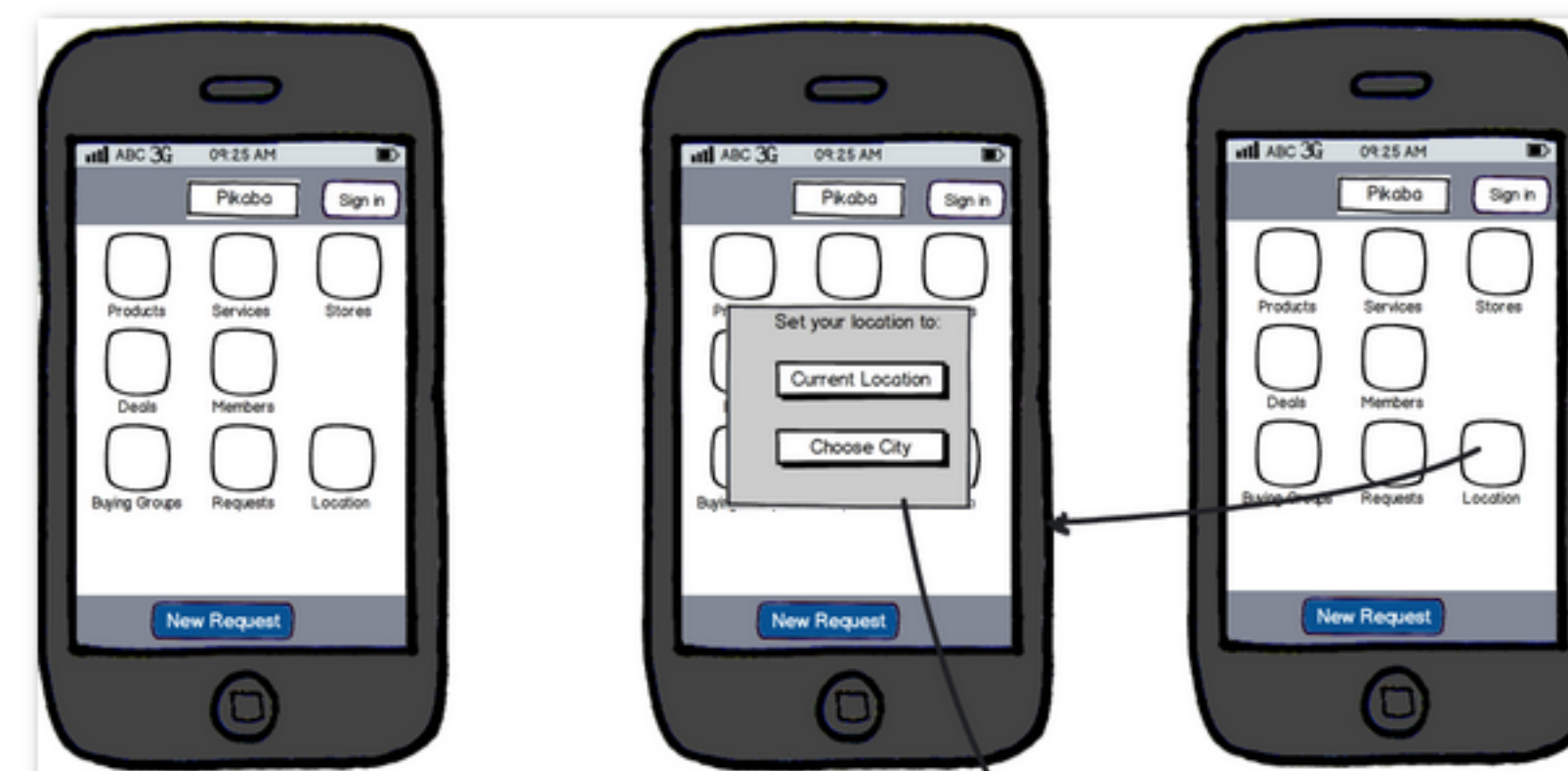
int main()
{
clrscr();
printf("Hello World");
getch();
return(0);
}

•Linking ..\SOURCE\NONAME00.EXE:

F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu
```

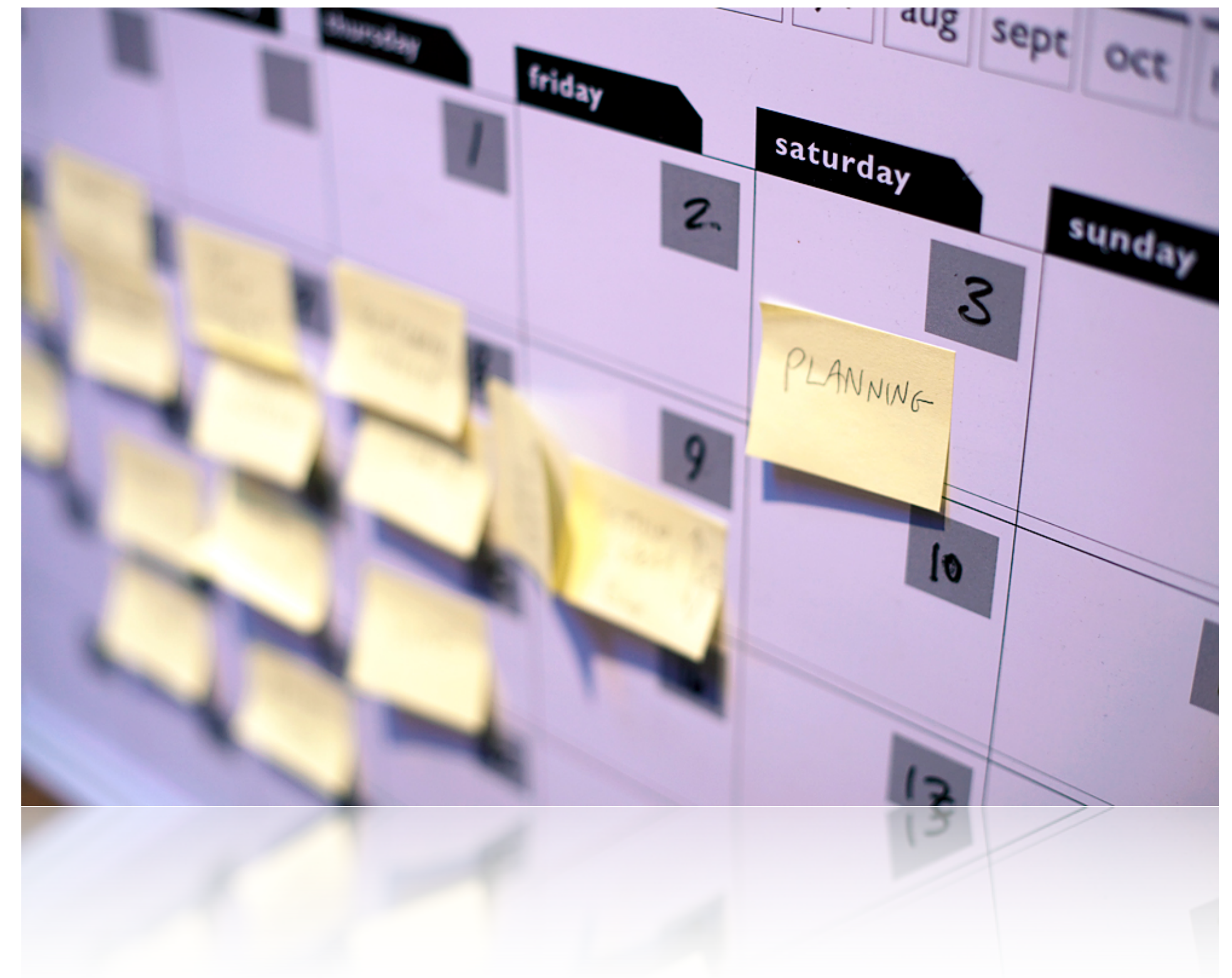
# Class Outline

- Introduction to mobile application development: concepts, challenges, market
- Two main modules:
  - Android (~10/11 lectures) by Marco
  - iOS (~10/11 lectures) by Simone
- Final lecture related to cross-platform applications



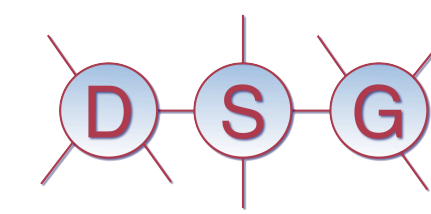
# Class Schedule

- Monday @ 2:30 PM - Room 8
- Wednesday @ 4:30 PM - Room 1



# Prerequisites

- The following skills are highly recommended (almost mandatory):
  - Basic programming skills (algorithms and data structures) - we have no time to cover the bases
  - Basic knowledge of C, C++, and/or Java syntax
  - for Android development, any computer is fine
  - for iOS development, a Mac is needed (if you do not have one, you can use one in the lab - more on this when iOS module starts) - how many?
- The following skills are a plus, yet not mandatory (the class will cover some of these points)
  - Object-oriented programming experience
  - Confidence with design patterns



# Downloads

- All the slides and code examples are available for download at <http://mobdev.ce.unipr.it/2013/> under the *download* section
- Slides and code will be available on the day before or the same day of the lecture

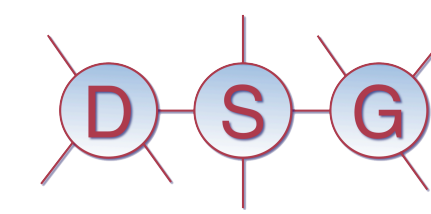
# Exam & Projects

- The final grade will depend on two components:
  - Exam (open questions) at the end of the class (weight = 1/3)
  - Individual or group (max 3 people) project (Android OR iOS) (weight = 2/3)
- In case of a group project
  - the project must be properly scaled
  - the contribution of each member must be clear and balanced

If you wish to have your project as part of your internship or thesis, just tell us and we will work it out!

# Reception hours

- Where: **Pal.2 Sede Scientifica, Room 2/4**
- When: **Monday 4:30 PM - 6:30 PM** (after lecture)
- In order to avoid congestion and longer waiting times, it is best to send an email before coming



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