

# AP Computer Science A

Intro Day

# What is AP Computer Science A?

- Answer by Example: Marakech
- Take turns picking numbers
- First person with 3 numbers adding up to 15 wins
- Picking an already taken number results in automatic loss (ties are possible)



# Magic Square Trick

8	1	6
3	5	7
4	9	2

You text 8

X	1	6
3	5	7
4	9	2

They text 5

X	1	6
3	O	7
4	9	2

You text 2

X	1	6
3	O	7
4	9	X

They text 4

X	1	6
3	O	7
O	9	X

You text 6

X	1	X
3	O	7
O	9	X

They text 7

X	1	X
3	O	O
O	9	X

You text 1

X	X	X
3	O	O
O	9	X

**and win!**

# Lessons from Marakech

- Hard problems (usually) can be reduced to easier, more familiar problems
- Logic, critical thinking, and problem solving skills are needed
- How to teach a computer to play Tic-Tac-Toe? We have to develop something called an **algorithm**.



# Components of AP A

- Year 1: AP Comp Sci A
  - data types, control flow, methods, loops, arrays
  - Grid World Case Study
- Year 2: Video Game Programming and Design

# Lab Etiquette

- This lab has very expensive computers. That means no...
  - food
  - drinks
  - rolling in chairs
  - running
  - throwing



# Music



- No headphones
- No iPods or other like MP3 players
- No music playing through CDs in computer
- The programs we write may make noise or play songs
- I may play music for everyone to enjoy

# Cleanliness

- The lab is a privilege, not a right
  - Chairs should be pushed in
  - Pick up area around you
  - No unnecessary printing
  - No games / software downloads



# Game Caveat

- You are allowed to play games that you write or a classmate writes
- You are not allowed to play “Slime Basketball” and other silly flash games unless you write them yourself

# Ethics

- Don't cheat
- Don't copy the work of others
- Copying work generally leads to
  - lack of learning / confusion
  - poor quiz and test scores

# Grading System

- 10% Homework
- 30% Projects
- 60% Quizzes and Tests
- Semester Grade
  - 40% Q1 + 40% Q2 + 20% Final
  - Final Exam: Half MC, Half Project

# More on Grading

- Every marking period will consist of
  - Several graded homework assignment
  - 2 or 3 large graded projects
  - 2 or 3 quizzes/tests
- There will be some small labs and assignments that may not be graded

# Late Work

- Late Homework will only be accepted if an absence is excused
- Late projects will be accepted with a 10% penalty for every day late

# Outside Class Commitment

- Many projects require work outside of class
- Students who work outside of class:
  - get better grades
  - make cooler programs

# Outside Computer

- A home computer is **very** helpful
- There are several school computer labs you can use to finish projects
- A USB drive (or similar) is a preferred method of transferring data



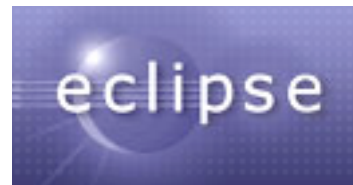
# Java Development Kit

- You will need to install the Java Development Kit (6.0) to work on projects at home
- Download link is on the sidebar of my website.



# Eclipse

- We will use a software product called Eclipse
- It's free - install it at home!
- Website: <http://www.eclipse.org>



# Help

- My Free Periods are
  - Period 1-2
  - Periods 5-6
- I am also available for help before or after school on most days
- If you do not see me for help well before a project is due, I may be unable to help you at the last minute!

# Online Help

- <http://forum.java.sun.com/>
- <http://www.javaranch.com/>
- <http://java.sun.com/docs/books/tutorial/>
- Google: Question/Problem/Error message
- fahrenba@mac.com - I check this more than my school email



# Moodle

- Go to <http://moodle.niles-hs.k12.il.us/>
- Find AP Computer Science
- You will need to use an enrollment key to get in. It is 011235.
- We will use Moodle for online class activities

# Tonight's Homework

- Read and sign Rules and Procedures electronically by **tomorrow!**
- Install JDK and Eclipse at home
  - See Video Install Guide on website
  - We won't use Eclipse till next week