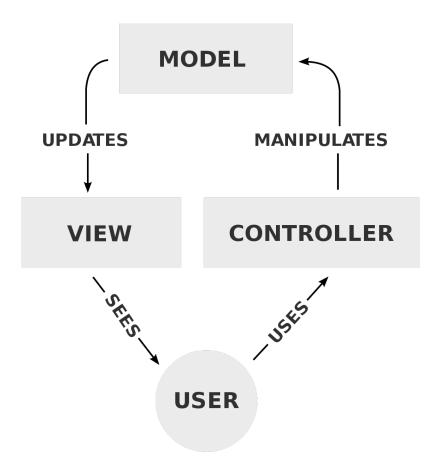
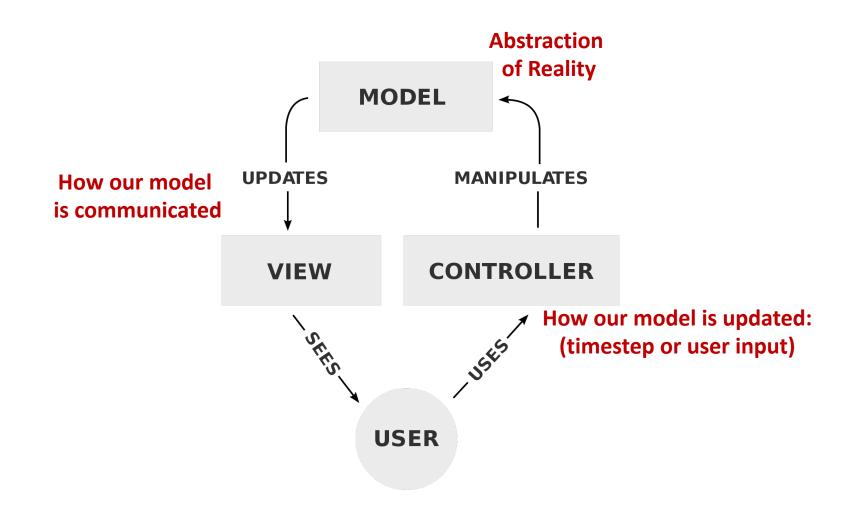
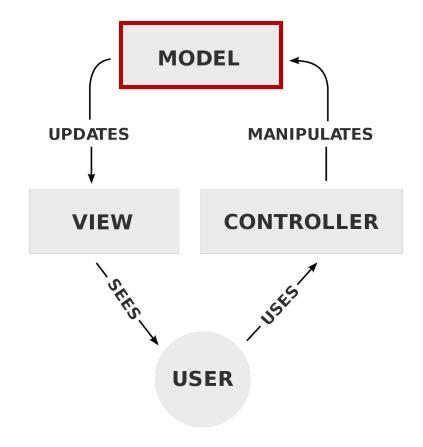
GEOG 178/258 Week 8:

Model Viewer Controller: MVC

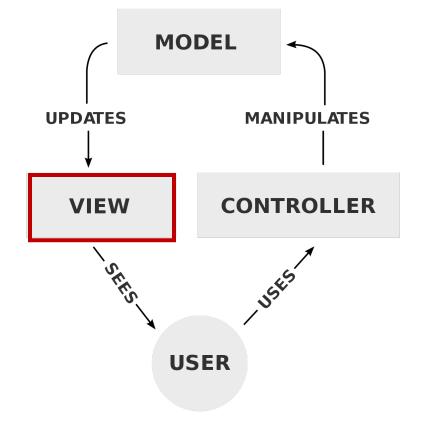
mike johnson



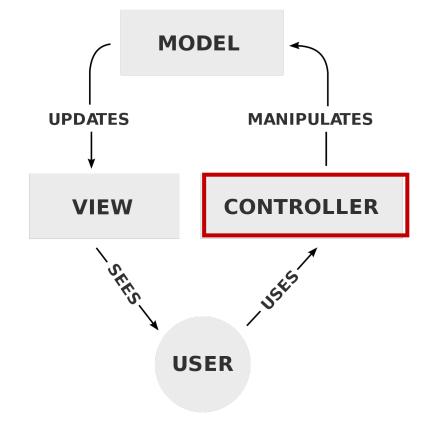




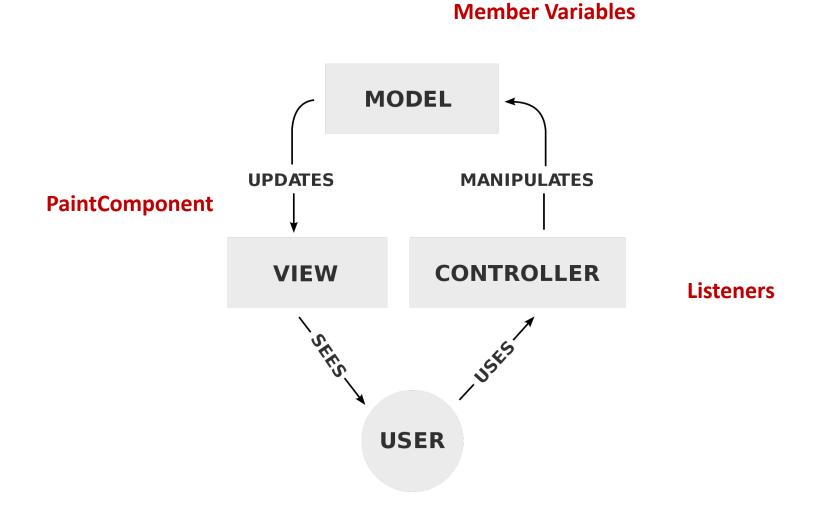
- What are we trying to model? (Movement, physical process, behavior...?)
- 2) What is the abstraction we are interested in?
- How will we represent the pieces in the most basic form (think back to the 'essence' of the object)
- 4) What classes can we inherit and which need to be built?



- How will results communicated? (Map, plot, text...)
- 2) What aspects of the model are we interested in as 'results'



 How will the model run? (timesteps, user input, single case...)

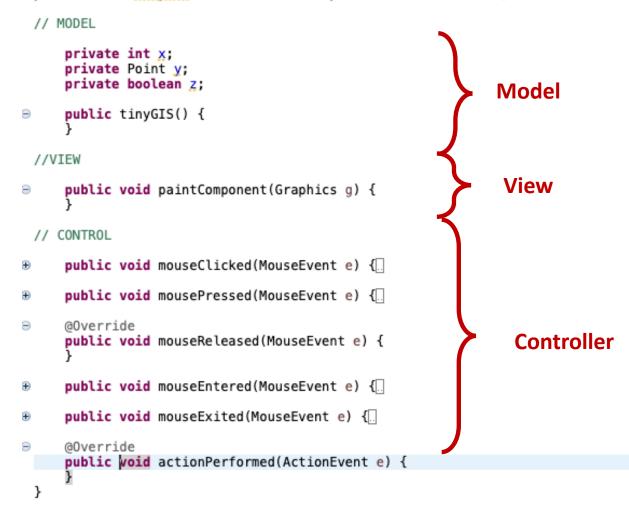


Model View Controller: Signature

public class tinyGIS extends JPanel implements MouseListener, ActionListener { Model View Controller

Model View Controller: Code

public class tinyGIS extends JPanel implements MouseListener, ActionListener {



Model View Controller: Visual

View

inyGIS 14 Recreation Turn labels off Center P Pool Sa Rd UCSB Athletic Fields (Rob) Lot 18 Mesa Ra CON UCSB Military Student Affairs & Science Rd Admin.Services Robertson Phelps Hall 570 489 Mesa Po Gymnasium Cheadle Hall D Intercollegiate Java Class Athletic Coral Po Elliso Tree Cafe University Engineering Ocean Rd Bus Loop Science Buchanan Elings Hall of California Student E Cole ۲ Hall Health Gevirtz Graduate Santa Barbara 20 Engr II School of -ocean Education ek Park Univ Sh. 47 Kerr Hall Kavli Institute of C UCSB 会 Pool For Theoretical 🕤 El Centro Broida Hall Physics Ρ Arbor Humanities and 300 Social Sciences College of Engineering 477 Sc Woodhouse Hāll Davidson Quest Laboratory Performing Library Girvetz Hall Counseling and Arts Theater Webb Hall Career Services Bren Hall 000 Student 569 Marine Science 346 Beach Resource Bldg 쁙 408 Research Art Museum Noble Hall 411 a Library R Storke Plaza UCSB 429 BSIF Faculty Club 387 Psych Life Bio II ticultural. Loading University Sciences Ρ UCEN Rd Dock Center Santa San Rosa Hall Anacapa Rafael Hall San al oma Hall **Model**

Controller

Model View Controller: Homework

- Implement a POI App that allows you to digitize a path as well as POIs via mouse clicks (and store both types of geometries).
- Show the names of the POIs when they are visited (via the digitized path)
- Allow the user to name POIs and check their names by clicking on them [GEOG 258 only] (http://docs.oracle.com/javase/tutorial/uiswing/components/dialog.html)
- Implement the path in a way that it can be reset which also causes the display to hide the POI names. [GEOG 258 only]

HW MVC

Model:

POIs: Have **names**, and can be **visited** (Extend PointBuffer?) **Paths**: Can visit POIs and be reset (PolyLine)

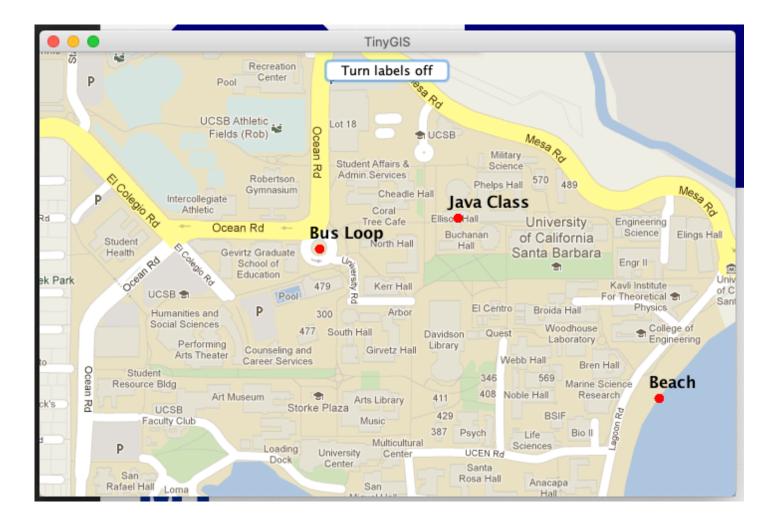
Viewer:

Map (campus.png; g.drawImage())
POI (w and w/o names) (g.fillOval(x,y))
Path (d.drawLine(x1,y1,x2,y2)

Controller:

Clicks let you **draw** new points, and **name** existing points (MouseListener) Path can be **reset** (ActionListener?)

In Class Examples



Homework

Assignment

- Implement a POI App that allows you to digitize a path as well as POIs via mouse clicks (and store both types of geometries).
- Show the names of the POIs when they are visited (via the digitized path)
- Allow the user to name POIs and check their names by clicking on them [GEOG 258 only] (http://docs.oracle.com/javase/tutorial/uiswing/components/dialog.html)
- Implement the path in a way that it can be reset which also causes the display to hide the POI names. [GEOG 258 only]
- (We will learn about Exceptions next time (but you may have read about them before)
- Upload a zip file [LN1W5.zip] with the *.java files to GauchoSpace.
- Assignments and executable programs are due the day before lecture at 5pm PST of each week.