Capital College Visual Science
2/14/2020
CMPSC 488
Development Plan

Month	Day	Development Plan	Test and Demonstration Plan
February	3		
	10	● Application Window (Framework)	● User can open and compile
	17		● Tests for basic gravitational simulation code ● Some example inspection mode text ● Some basic low-level graphics code for celestial rendering ● Early UI prototype example components
	24	● Inspection Mode Text ● Gravitational Simulation	● Complete inspection mode text ● Gravitational simulation graphical demo with n-bodies without additional kinematics (like angular momentum, collisions)
March	2		● Basic camera controls integrated into the gravity demo ● Additional UI prototype with basic dialog framework ● Partial 3D celestial rendering with or without heightmap, but with at least a procedural UV or icosphere
	9	● Menu Bar ● Inspection Mode Controller	● Complete UI demo of menu bar and utility options ● Tests for Inspection Mode physical features detection algorithms
	16	● Physical Properties Dialog ● Input Controller ● 3D Celestial Rendering ● Stellar Models Description	● User can create moons and other natural satellites ● User can change orbits and rotations of celestial bodies ● User can use camera and movement controls to view the simulation ● User can see a 3D render of their celestial model ● User can edit physical properties of the celestial body
	23	● Celestial Bodies Dialog ● Kinematics Simulation	● User can view their celestial body with different inspection modes

Capital College Visual Science
2/14/2020
CMPSC 488

	30	• Inspection Mode Dialog	• Users can inspect physical phenomena in detail directly from the simulation
April	6	• N-body Rendering • Collision FX • Thermodynamics Simulation • Stellar Models Dialog	• User can see and hear the effects of celestial objects colliding • User can read about their chosen stellar model • User can view the effects of thermodynamics
	13		
	20	• Atmospherics Simulation • Atmospherics Rendering • Lighting and Stellar Effects • Save/Load Controller	• User can save their project • User can view lighting changes • User can view the atmosphere of their celestial body
	27	• Electromagnetism Simulation • Status Bar	• User can view the effects of electromagnetism on their celestial body
May	4	• Electromagnetism Rendering • Inspection Overlay	

Capital College Visual Science
2/14/2020
CMPSC 488
Gantt Chart

	Feb				Mar					Apr				May
	3	10	17	24	2	9	16	23	30	6	13	20	27	4
Application Window (Fery)	▓	▓												
Inspection Mode Text (Fery)		▓	▓											
Gravitational Simulation (Matthew)		▒	▒											
Menu Bar (Foram, Dominique)		▓	▓	▓	▓									
Physical Properties Dialog (Foram)					▓	▓								
Celestial Bodies Dialog (Foram)						▓	▓							
Stellar Models Description (Fery)				▓	▓									
Inspection Mode Dialog (Foram)							▓	▓						
3D Celestial Rendering (Danny)		▓	▓	▓	▓									
Input Controller (Dominique)			▓	▓	▓									
Inspection Mode Controller (Matthew)			▒	▒	▒									
Kinematics Simulation (Matthew)					▒	▒	▒							
N-body Rendering (Danny)						▓	▓	▓	▓					
Collision FX (Danny, Dominique)						▓	▓	▓	▓					
Thermodynamics Simulation (Matthew)							▒	▒	▒					

Capital College Visual Science
2/14/2020
CMPSC 488

Task														
Atmospherics Simulation (Matthew)									▰	▰	▰			
Atmospherics Rendering (Danny)									▰	▰	▰			
Stellar Models Dialog (Foram)								▰	▰					
Lighting and Stellar Effects (Dominique)									▰	▰	▰			
Save/Load Controller (Fery)						▰	▰	▰	▰	▰	▰			
Electromagnetism Simulation (Matthew)											▰	▰		
Electromagnetism Rendering (Danny, Matthew)											▰	▰	▰	
Inspection Overlay (Danny, Matthew)											▰	▰	▰	
Status Bar (Foram, Dominique)											▰	▰		