

Space Invaders : Sprint Plan 1

Group 22

TI2206 Software Engineering Methods

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Sprint plan 1

User Story	Task	Assigned to	Estimated effort
Exercise 1	1.1 - Derive classes, responsibilities, and collaborations	Bryan	2 hours
	1.2 - Describe main classes already implemented	Bryan	30 minutes
	1.3 - Describe less important classes and make changes	Bryan	1 hour
	1.4 - Draw class diagram of main elements	Bryan	1 hour
	1.5 - Draw sequence diagram to describe main element interactions	Jochem	1 hour
Exercise 2	2.1 - Difference between aggregation and composition	Jochem	30 minutes
	2.2 - Parameterized classes	Jochem	30 minutes
	2.3 - Class diagrams for all hierarchies	Jochem	2 hours
Exercise 3 User Story 1	3 - Creating requirements	All	30 minutes
	3 - Determine classes	Ege	30 minutes
	3 - Select classes to implement	Dorian	30 minutes
	3 - Identify class responsibilities	Ege	30 minutes
	3 - Determine hierarchy, UML	Ege	2 hours
	3 - jUnit tests	Dorian	2 hours
	3 - Implementation	Ege/Dorian	4 hours

User Story 1

As a developer

I want to be able to see the actions performed during execution so that I can make debugging easier.

Excercise 1

Exercise 1.1:

To follow the responsibility driven design we started with the requirements.

Looking add the requirements we came up with the following classes:

For this candidate classes we made CRC cards and distributed this cards to the team. We walked

through scenarios to uncover unneeded and misssing classes and responsibilities.

Finally we created the following list of classes with their responsibilities and collaborations:

Class	Responsibility	Collaborates with	Super	Sub
Game	All units in the game	all the controlles		
SpaceShipController	Activities of the spaceship	Game		
SpaceShip	Shooting a bullet	SpaceShipController	Unit	
ShipBullet		bulletController	Bullet	
Player	The score and lives of the player	Game		
AlienController	The movements of the aliens	Game		
Alien	Shooting a bullet	AlienController	Unit	
AlienBullet		Bullet	Bullet	
BulletController	Movements of the bullets	Game		
Bullet		BulletController	Unit	AlienBullet ShipBullet
ExplosionController	The development of the explosions	Game		
Explosion	Counter of the explosion	ExplosionController	Unit	
BarricadeController	The changes of the barricades	Game		
Barricade	Health of the barricade	BarricadeController	Unit	
Unit	Location, seize and speed of a unit			Alien, Explosion, Barricade, Bullet, SpaceShip
Collisions	The collisions between all types of units	Game		
Draw	The drawings of elements on the screen	SpaceInvadersUI		
Drawbarricade	The drawings of the barricades	Draw		
DrawBullet	The drawings of the bullets	draw		
DrawSpaceShip	The drawings of the spaceship	draw		
DrawAlien	The drawings of the aliens			
SpaceInvadersUI	The presentation of the game on the screen	GameUIController		
GameUIController	The keyboard inputs and refreshing the frames	SpaceInvadersUI		
Main	The launch of the game	Game, GameUIController		