## TRACEABILITY TABLE

## Videogame Integrative Task 2

| Functional<br>Requirement | Class Name          | Method name   |
|---------------------------|---------------------|---|
| Set game<br>resolution    | VideoGameController | <pre>setResolution(resolution: int): void</pre>                               |
|                           |                     | showResolutions(): String   |
| Player<br>registration    | VideoGameManager    | registerPlayer(): void  |
|                           | VideoGameController | addPlayer(): boolean  |
|                           |                     | searchPlayer(id: String):<br>Player   |
|                           |                     | showPlayers(): String   |
|                           | Player              | Player(id: String, name:<br>String): void                                     |
| Level<br>registration     | VideoGameController | addLevel(scoreLimit:<br>double): boolean                                      |
|                           | Level               | Level(scoreLimit: double): void   |
|                           |                     | setId(id: int): void  |
|                           | VideoGameManager    | registerTreasure(): void  |
| Treasure<br>registration  | VideoGameController | addTreasure(name: String, pictureUrl: String, scoreAddition: double): boolean |
|                           |                     | searchTreasure(name:<br>String): Treasure                                     |
|                           |                     | showTreasures(): String   |
|                           | Treasure            | Treasure(name: String, pictureUrl: String, scoreAddition: double): void       |
| Enemy                     | VideoGameManager    | registerEnemy(): void   |

| registration                  | VideoGameController | addEnemy(id: String, type: int, scoreAddition: double, scoreSubstraction: double): boolean      |
|-------------------------------|---------------------|---|
|                               |                     | searchEnemy(id: String):<br>Enemy   |
|                               |                     | showEnemies(): String   |
|                               | Enemy               | <pre>Enemy(id: String, type: int, scoreAddition: double, scoreSubstraction: double): void</pre> |
|                               | VideoGameManager    | registerEnemyToLevel(): void  |
|                               | VideoGameController | showEnemies(): String   |
| Register Enemy to<br>a level  |                     | addEnemyToLevel(enemyId:<br>String, levelId: int):<br>boolean                                   |
|                               |                     | searchEnemy(enemyId:<br>String): Enemy  |
|                               |                     | searchLevel(levelId: int):<br>Level   |
|                               |                     | <pre>generatePosition(): int[2]</pre>   |
|                               |                     | <pre>isPositionTaken(position: int[2]): boolean</pre>   |
|                               |                     | <pre>showLevelObjects(id: int): String</pre>  |
|                               | Level               | addEnemy(newEnemy: Enemy, position int[2]): boolean   |
| Register treasure<br>to level | VideoGameManager    | <pre>registerTreasureToLevel(): void</pre>  |
|                               | VideoGameController | showTreasures(): String   |
|                               |                     | addTreasureToLevel(treasur eName: String, levelId: int): boolean                                |
|                               |                     | searchTreasure(treasureNam  |

|  |                     | e: String): Treasure  |
|--|---------------------|---|
|  |                     | searchLevel(levelId: int):<br>Level                                     |
|  |                     | <pre>generatePosition(): int[2]</pre>                                   |
|  |                     | <pre>isPositionTaken(position: int[2]): boolean</pre>                   |
|  | Treasure            | Treasure(name: String, pictureUrl: String, scoreAddition: double): void |
|  | Level               | addTreasure(newTreasure:<br>Treasure): boolean                          |
| Change player                                | VideoGameManager    | modifyPlayerScore(): void   |
|  | VideoGameController | searchPlayer(id: String):<br>Player                                     |
| score  | Player              | getScore(): double  |
|  |                     | <pre>setScore(score: double): void</pre>                                |
| Increase player<br>level                     | VideoGameManager    | <pre>increasePlayerLevel(): void</pre>                                  |
|  | VideoGameController | <pre>increasePlayerLevel(player Id: String, levelId: int): double</pre> |
|  |                     | searchPlayer(playerId:<br>String): Player                               |
|  |                     | searchLevel(levelId: int):<br>Level                                     |
|  | Player              | getScore(): double  |
|  |                     | getLevel(): int   |
|  | Level               | getScoreLimit(): double   |
| Print treasures<br>and enemies of a<br>level | VideoGameManager    | <pre>printLevelObjects(): void</pre>                                    |
|  | VideoGameController | <pre>printLevelObjects(levelId:   int): String</pre>                    |

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|                             | Level               | showEnemies(): String                            |
|                             |                     | showTreasures(): String                          |
| Count treasure name         | VideoGameManager    | countTreasureName(): void                        |
|                             | VideoGameController | showTreasures(): String                          |
|                             |                     | countTreasureName(treasure<br>Name: String): int |
|                             | Level               | countTreasureName(treasure<br>Name: String): int |
|                             | Treasure            | getName(): String                                |
|                             | VideoGameManager    | countEnemyType(): void                           |
|                             |                     | showEnemyTypes(): String                         |
| Count enemy type            | VideoGameController | <pre>countEnemyType(enemyType: int): int</pre>   |
|                             | Level               | <pre>countEnemyType(enemyType: int): int</pre>   |
| Check most                  | VideoGameManager    | <pre>mostRepeatedTreasure(): void</pre>          |
|                             | VideoGameController | <pre>mostRepeatedTreasure(): String</pre>        |
| repeated treasure           |                     | showTreasures(): String                          |
|                             |                     | countTreasureName(treasure<br>Name: String): int |
|                             | Treasure            | getName(): String                                |
| Check most valuable enemy   | VideoGameManager    | mostValuableEnemy(): void                        |
|                             | VideoGameController | mostValuableEnemy():<br>String                   |
| Count enemy name consonants | VideoGameManager    | <pre>countEnemyNameConsonants() : void</pre>     |
|                             | VideoGameController | <pre>countEnemyNameConsonants() : int</pre>      |
|                             | Enemy               | getName(): String                                |
|                             |                     |  |

| Print player top<br>5 | VideoGameManager    | <pre>printPlayerTop(topLimit: int): void</pre>                  |
|-----------------------|---------------------|---|
|                       | VideoGameController | <pre>printPlayerTopFive (): String</pre>                        |
|                       |                     | isPlayerInTop(tmpPlayer: Player, topPlayers: Player[]): boolean |
|                       |                     | <pre>countRealPlayers(players: Player[]): int</pre>             |
|                       |                     | <pre>getTopPlayer(topPlayers: Player[]): Player</pre>           |