**Integrative task 2 - Design solution**

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| **Functional Requirements** | **Class Name** | **Method Name** |
| RF1: Creating a Galaxy | UniversoApp() | createGalaxy() |
| RF2: Creating a Black Hole | UniversoApp() | createBlackHole() |
| RF3: Create or register a Planet | UniversoApp() | createPlanet() |
| RF4: Remove a planet | UniversoApp() | deletePlanet() |
| RF5: Modify the data of a planet | UniversoApp() | modifyPlanet() |
| RF6: Add a photo to a planet | UniversoApp() | addPhotoPlanet() |
| RF7: Query the information of a galaxy | UniversoApp() | consultGalaxyInformation() |
| RF8: Query the information of a planet | UniversoApp() | consultInformationPlanet() |
| RF9: Query the name of the galaxy farthest from planet earth | UniversoApp() | consultGalaxyFarth() |
| RF10: Query the name of the planet with the highest density | UniversoApp() | consultPlanetHigherDensity() |
| RF11: Query black hole names by type | UniversoApp() | consultBlackHolesByType() |
| RF12: Name of telescope with the highest number of photos recorded | UniversoApp() | consultTelescopeMorePhotos() |
| RF13: Creating Test Cases | UniversoApp() | creatingTestCases() |
| Galaxy Class Constructor | Galaxy() | - |
| Constructor of the Blackhole class | HoleBlack() | - |
| Planet class constructor | Planet() | - |
| Photo class constructor | Photo() | - |
| Method for establishing the galaxy's black hole | Galaxy | setHoleBlack |
| Method for calculating the volume of a planet | Planet | calculateVolume |
| Method for calculating the density of a planet | Planet | calculatingDensity |
| Method for counting photos by telescope | UniversoApp | countPhotosPer Telescope |
| Method for searching for a galaxy by name | UniversoApp | searchgalaxy |
| Method for creating a photo | UniversoApp | createPhoto |
| Method to add a photo to the Planet | Planet | addingPhoto |
| Method for establishing the galaxy's black hole | Galaxy | setHoleBlack |
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