**Drivers:**

**Statuses: Open, To Do, In progress, Done, Closed**

**Driver NO 1**

**Categorization**

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| --- | --- |
| **Driver Name** | Internet Connection availability |
| **ID** | AD.01.RELIABILITY |
| **Status** | Open |
| **Priority** | High |

**Responsibilities**

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| --- | --- |
| **Supporter** |  |
| **Sponsor** |  |
| **Author** | Arian Ajdari |
| **Inspector** | Rodrigo Falcao |

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| **Description** | | **Quantification** |
| **Environment** | Application is installed. System is running in normal mode. | Previous starts >= 0;  Mode = Normal |
| **Stimulus** | 1. Starting the app in Mobile or Carplay mode 2. Logging in 3. Creating Content (Notes, Picture) 4. Receiving Notifications | Todo: sep |
| **Response** | **Internet Available:**   1. App continues normal execution 2. User is transferred to home screen 3. The data is locally saved and delivered to appropriate database 4. User experiences normal flow of the notifications   **Internet Not Available:**   1. User is presented a message that there is no internet connection available 2. User is presented with the message that login is not possible 3. Data is locally saved and delivered to appropriate database when internet becomes available 4. User has a notification bar that internet connection is not available |  |

**Driver NO 2**

**Categorization**

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| **Driver Name** | Data Correctness |
| **ID** | AD.02.FUNCTIONAL SUITABILITY |
| **Status** | Open |
| **Priority** | High |

**Responsibilities**

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| --- | --- |
| **Supporter** |  |
| **Sponsor** |  |
| **Author** | Talant Asankozhoev |
| **Inspector** | Rodrigo Falcao |

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| --- | --- | --- |
| **Description** | | **Quantification** |
| **Environment** | User is logged in and has internet access. System is running normally. | Previous starts >= 0;  Internet Availability = TRUE |
| **Stimulus** | Any operation (related to JD data) initiation in the App. |  |
| **Response** | **Internet is Available:**   1. Normal execution: Data exchange using JD API happened. As a result User received latest data from JD DB or data is correctly saved in JD DB.   **Internet is Not Available**   1. Data is saved locally and marked “to be synced” as soon as Internet connection is there. {OPERATIONS: Creating content, Receiving Notifications} 2. User is informed about impossibleness of operations {All other Operations} |  |

**Driver NO 3**

**Categorization**

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| **Driver Name** | Geolocation Data is Complete |
| **ID** | AD.03.FUNCTIONAL SUITABILITY |
| **Status** | Open |
| **Priority** | High |

**Responsibilities**

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| **Supporter** |  |
| **Sponsor** |  |
| **Author** | Arian Ajdari |
| **Inspector** | Rodrigo Falcao |

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| **Description** | | **Quantification** |
| **Environment** | User is logged in and has enabled geolocation capabilities. System is running normally. | Previous starts >= 0;  Geolocation = TRUE |
| **Stimulus** | User performs an operation which requires geolocation data. |  |
| **Response** | For every operation requiring geolocation data, the geolocation is tagged successfully and normal execution resumes. |  |

**Driver NO 4 -**

**Categorization**

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| **Driver Name** | Data Resource Utilization |
| **ID** | AD.04.PERFORMANCE EFFICIENCY |
| **Status** | Open |
| **Priority** | High |

**Responsibilities**

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| --- | --- |
| **Supporter** |  |
| **Sponsor** |  |
| **Author** | Talant Asankozhoev |
| **Inspector** | Rodrigo Falcao |

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| --- | --- | --- |
| **Description** | | **Quantification** |
| **Environment** | User is logged in and has internet access. System is running normally. | Previous starts >= 0;  Internet Availability = TRUE  Internet connection bandwidth **≥ 144Kb/s** |
| **Stimulus** | User performs an operation which requires transfer of the data over the internet. |  |
| **Response** | Every operation requiring internet data can be completed successfully. |  |

**Driver NO 5**

**Categorization**

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| **Driver Name** | PRODUCT MAINTAINABILITY |
| **ID** | AD.05.MAINTAINABILITY |
| **Status** | Open |
| **Priority** | Low |

**Responsibilities**

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| --- | --- |
| **Supporter** |  |
| **Sponsor** |  |
| **Author** | Arian Ajdari |
| **Inspector** | Rodrigo Falcao |

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| --- | --- | --- |
| **Description** | | **Quantification** |
| **Environment** | Development Environment (XCode, any Java development env.) |  |
| **Stimulus** | Development Activity |  |
| **Response** | Complete Architecture and Features should be developed in such a way to satisfy the following criteria:   1. Modularity 2. Reusability 3. Analysability 4. Modifiability 5. Testability | To be quantified |

**Driver NO 6**

**Categorization**

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| **Driver Name** | Features Accessibility |
| **ID** | AD.05.ACCESSIBILITY |
| **Status** | Open |
| **Priority** | High |

**Responsibilities**

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| **Supporter** |  |
| **Sponsor** |  |
| **Author** | Talant Asankozhoev |
| **Inspector** | Rodrigo Falcao |

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| **Description** | | **Quantification** |
| **Environment** | User is in the car, using Apple CarPlay and the phone is plugged in CarPlay. User is logged in and system is running normally. | Previous starts >= 0; |
| **Stimulus** | Below operations initiated:   1. Creating content (notes) 2. Receiving notification |  |
| **Response** | Activities are performed successfully with technically least possible distraction. | Distraction - technically least possible. |

Decisions:

<https://www.hackingwithswift.com/example-code/system/how-to-make-an-action-repeat-using-timer>

AD01

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| Name | Check Internet connection availability |
| ID | DD.01 |
| Explanation | User actions or Periodically running jobs requiring internet connection are always preceded by “checking Internet connection availabality” utility function. |

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| Pros | Cons |
| * Very fast responses, that leads to good user experience * Reliable, because we dont need to preprocess and send data | * Extra function call for Internet connection availability check |
| Assumptions&Quantifications | Trade-offs |
| * Internet connection availability check run successfully * Checking done very quickly, so there is no impact in overall performance of App | * ?Maintainability |

AD02

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| Name | Check for last modified date |
| ID | DD.02 |
| Explanation | In order to be sure for the correctness of data, we always check for last modify date from JD API. |

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| Pros | Cons |
| * Very fast responses, that leads to good user experience * Reliable, because we don’t need to preprocess and send/receive data | * Extra API call for last modify date check * Additional implementation |
| Assumptions&Quantifications | Trade-offs |
| * Internet connection is available. * Little impact on app performance | * ?Maintainability |

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| Name | Always Pull data using JD API |
| ID | DD.03 |
| Explanation | In order to be sure of the correctness of data, we always pull data using JD API. |

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| Pros | Cons |
| * Reliable * Correct | * Extra API call * Additional implementation * Increased Data Consumption |
| Assumptions&Quantifications | Trade-offs |
| * Internet connection is available. * Data is reliable and correct | * Performance |

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| --- | --- |
| Name | Create local DB |
| ID | DD.04 |
| Explanation | * Data pulled from JD API needs to be stored on the phone * Data that needs to be send to the JD API is locally stored on the phone. |

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| Pros | Cons |
| * Increased Performance | * Increased App complexity * Additional implementation * Increased Data Consumption (Internet) * Requires More Storage on the Phone |
| Assumptions&Quantifications | Trade-offs |
| * Provides groundwork for data correctness. * Data is reliable and correct | * Maintainability |

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| Name | Create file to save data in JSON format |
| ID | DD.05 |
| Explanation | Data pulled from JD API needs to be stored on the phone in appropriate format. |

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| Pros | Cons |
| * Storage Efficient | * Data manipulation is more complicated in respect to Database * File growth could handicap performance in respect to data manipulation |
| Assumptions&Quantifications | Trade-offs |
| * Provides groundwork for data correctness. * Data is reliable and correct | * Maintainability |

AD.03

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| Name | Check if GPS is enabled |
| ID | DD.06 |
| Explanation | When user initiates an operation, that requires GPS location information, Application should check if GPS is enabled. |

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| Pros | Cons |
| * Good user experience. We only check if GPS is enabled on device and ask user immediately to enable. | * Extra function call * Additional implementation |
| Assumptions&Quantifications | Trade-offs |
| * Device has GPS module | * Maintainability * Performance |

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| --- | --- |
| Name | Tagging GPS coordinates |
| ID | DD.07 |
| Explanation | If the user proceeds with the operation that requires GPS info, then get GPS location and save together with other data. |

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| Pros | Cons |
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| Assumptions&Quantifications | Trade-offs |
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AD.04

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| Name | Check Internet connection type |
| ID | DD.08 |
| Explanation | When user initiates an operation, that requires Internet connection, Application should check the type connection. |

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| Pros | Cons |
| * Good user experience. * Data transfer efficiency | * Extra function call * Additional implementation |
| Assumptions&Quantifications | Trade-offs |
| * Device has at least 3G support | * Maintainability * Performance |

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| --- | --- |
| Name | Provide option for user in Settings for data uploading ways |
| ID | DD.09 |
| Explanation | User sets the data usage ways over the Internet in the Settings |

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| Pros | Cons |
| * Good user experience. * Data transfer efficiency | * Increased complexity of the App * Additional implementation |
| Assumptions&Quantifications | Trade-offs |
|  | * Maintainability * Performance |

AD.05

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| Name | Follow the official Apple guide for developers |
| ID | DD.10 |
| Explanation | <https://help.apple.com/xcode/mac/current/#/dev8b4250b57> |

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| Pros | Cons |
| * Good Application maintenance |  |
| Assumptions&Quantifications | Trade-offs |
| * Team is not experienced * All documentation and source code is transferred to the client |  |

AD.06

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| Name | Use Apple Software development guidelines concerning Carplay |
| ID | DD.11 |
| Explanation | TODO |

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| Pros | Cons |
| * Limited scope of possible features * Saving time | * Limitations in creativeness |
| Assumptions&Quantifications | Trade-offs |
| * Apple imposes strict guidelines for developments of App for Carplay |  |

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| --- | --- |
| Name | Focus on “Messaging and VoIP” Application type |
| ID | DD.12 |
| Explanation |  |

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| Pros | Cons |
| * Limited scope of possible features | * Limitations in creativeness |
| Assumptions&Quantifications | Trade-offs |
| * Apple imposes strict guidelines for developments of App for Carplay * Only subset of the “Messaging and VoIP” libraries used |  |