
Software Design and Implementation

TrekStar Software System

Callum Axon (N0727303), Callum Carney (N0741707),
Matthew Robinson (N0724629)

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Contributions

Callum Axon (N0727303)

- Stuff

Callum Carney (N0741707)

- Other Stuff

Matthew Robinson (N0724629)

- More Stuff

System Description

The Trekstar system has been developed in order to allow TrekStar Pictures to accomplish the following

- Create and Manage Projects including any relevant metadata
- Create and Manage Project Materials (single-sided DVDs, Blu-rays, etc)
- Create Projects that are “unreleased” and cannot be modified once created
- Include details in regards to the crew working on a Project

Class Diagram

Include class diagram here.

Cohesion and Coupling Considerations

A justification and explanation of how cohesion and coupling have been considered in the design.

Sequence Diagram

Include sequence diagram here

State Diagram

Include state diagram here

Component Diagram

Include component diagram here

Deployment Diagram

There are two possible deployment scenarios for the TrekStar management system, these being:

1. An individual user will have the TrekStar project management system installed on their machine, using a locally stored JSON Database.
2. TrekStar Pictures will release the TrekStar project management system company-wide, using a shared JSON Database for each installation.

These two deployments are different due to the change in the data storage location, in which the latter will support company-wide collaboration through the application.

However, no matter where the application is installed the following Operating Systems are supported:

- Windows 10/8/7
- Mac OS
- Linux

Below you can find a visual representation of the aforementioned Deployment scenarios.

Individual Installation

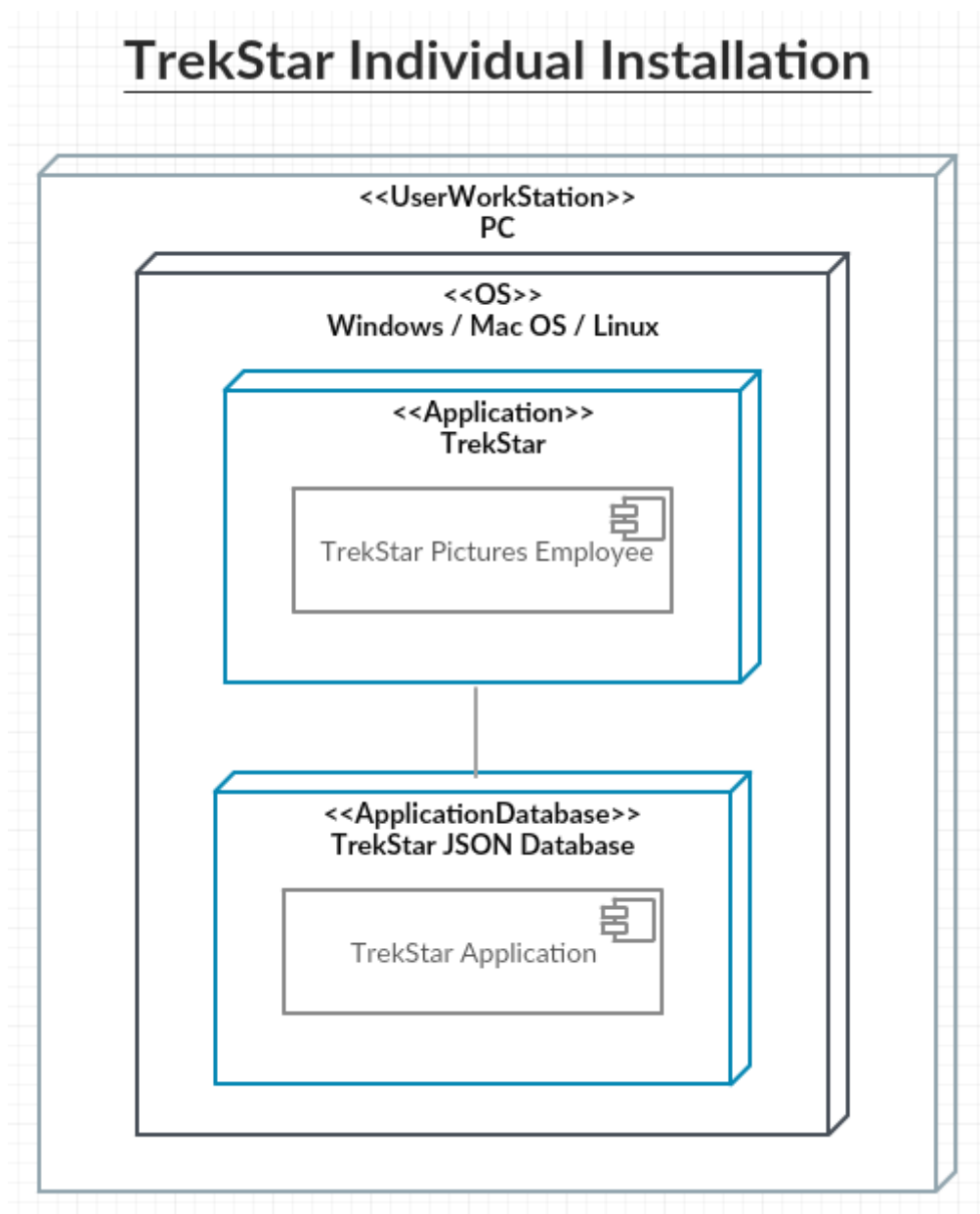


Figure 1: Visual Representation of Individual TrekStar installation

Company-Wide Installation

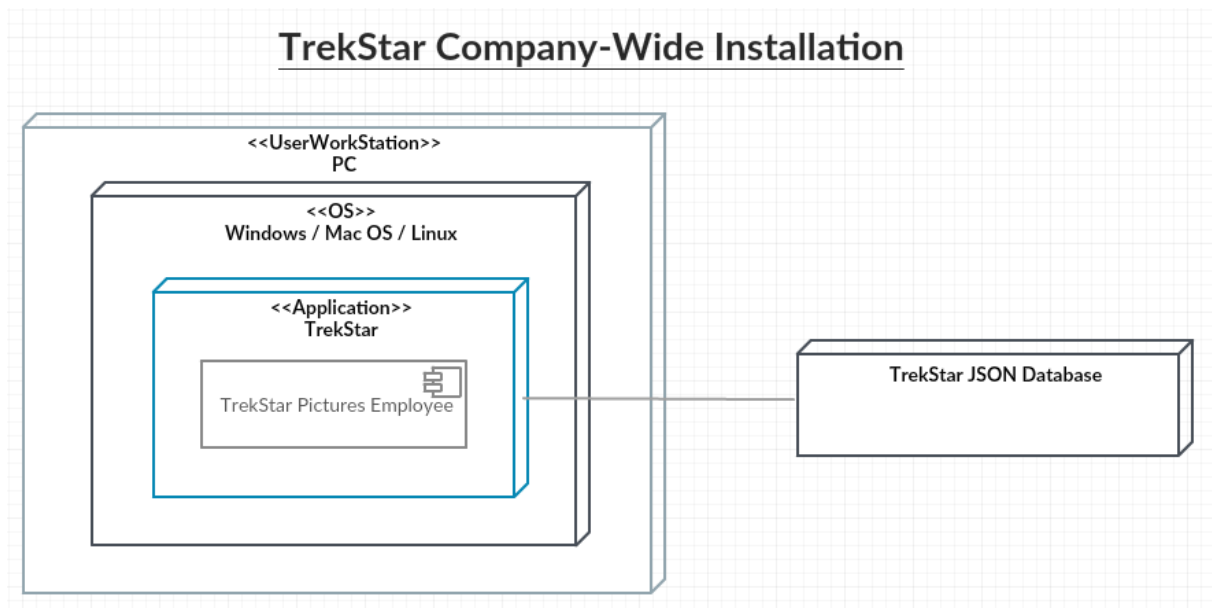


Figure 2: Visual Representation of Company-Wide TrekStar installation

Design Pattern

Include explanation of any design patterns used

Planned Architecture

An explanation of the planned architecture and the reason of the choices according to ATAM (follow step 4 and 5, i.e., identify possible architecture styles and choose one with respect to the identified utility tree, you need to explain the reason).

Included C++ Libraries

Include explanation of any C++ Libraries used

Internal Data Structures

Include explanation of what internal data structures were used.

Search/Sorting Algorithm

Include explanation of the search/sorting algo used.

UI Screenshots

Include screenshots of console app here.

Software Testing Prodcedure

Include explanation of software testing procedure here.

User Manual

Include user manual here

Conclusion

Discussion and conclusion about your results (reflection on testing approach, reflection on performance such as computational efficiency, reliability, security, portability, maintainability, scalability, etc. design of system complexity using e.g. big O- notation).

Appendix