CSCI P445

Fall 2021

James Schlesener

**Open-Source Software Selection Report**

1. Are the open-source license terms compatible with my business requirements?

Angular and Node.js are both under MIT license. MySQL is 100% General Public License. They are all free to use and are compatible with my business requirements.

1. What is the strength of the community?

Angular is maintained by Google and a community of individuals and corporations. Node.js has one of the largest, most vibrant and innovative open-source communities in the world. MySQL is the world’s most popular open-source database and is supported by a huge and active community of open source developers.

1. How well is the product adopted by users?

Angular, Node.js, and MySQL are all widely used software products. Angular is used by Microsoft Office, Gmail, Forbes, PayPal, and Samsung. Node.js is used by GoDaddy, Groupon, IBM, LinkedIn, Microsoft, Netflix, PayPal, Walmart, Yahoo!, and Amazon Web Service. MySQL is used by many popular websites including Facebook, Flickr, MediaWiki, Twitter, and YouTube.

1. Can I get a warranty or commercial support if I need it?

You can’t get a warranty for Angular, Node.js, or MySQL. All the major releases of Angular are supported for 18 months. This consists of 6 months of active support, during which regularly scheduled updates and patches are released. It is then followed by 12 months of long-term support during which only critical fixes and security patches are released. New major releases of Node.js occur every 6 months. When a new version is released, the previous release transitions to long term support which gives that version 18 months of active support. After the 18 months expire, it receives an additional 12 months of maintenance support. For MySQL, support can be obtained from the official manual. In addition, free support is available in different IRC channels and forums, and a number of third party organizations exist to provide support and services.

1. What quality assurance processes exist?

Angular releases go through code review and integration testing processes. They ensure that the stability and reliability of the platform is maintained. Node.js has a Release Working Group that is created by the Technical Steering Committee. They manage the release process for Node.js. They define the release process, define the content of releases, generate and create releases, test releases, manage the long term support, and define the policy for what gets backported to release streams. Quality goals for new features for MySQL are complete functional and nonfunctional test coverage of changed and new functionality, no regressions, and at least more than 80% code coverage. QA involvement starts as soon as the requirements and specifications of the feature are finalized by the development team. QA reviews available documents and provides feedback on the design, usability, testability, etc. Once the specifications and requirements are acceptable, QA creates the test plan which documents all scenarios that are to be tested. While the developers are writing the product code, QA engineers start working on the automated tests, test infrastructure improvements, etc. The final round of testing starts after the feature has passed code reviews.

1. How good is the documentation?

Angular, Node.js, and MySQL are all well-known software products and have thorough documentation. Angular documentation can be found at angular.io/docs. Node.js documentation can be found at nodejs.org/en/docs/. MySQL documentation can be found at dev.mysql.com/doc/.

1. How easily can the system be customized to my exact requirements?

Angular, Node.js, and MySQL are all well-established open-source software that meet the requirements for my project. There won’t be any customization needed.

1. How is this project governed and how easily can I influence the road map?

Information on how to contribute to the Angular open-source project can be found at <https://github.com/angular/angular/blob/master/CONTRIBUTING.md>. Before someone can contribute, they must sign the Contributor License Agreement (CLA). Contributions are made through submissions on github.

The Node.js project follows a consensus seeking decision making model. The project is governed jointly by the Technical Steering Committee (TSC) which is responsible for high-level guidance of the project, and the Community Committee which is responsible for guiding and extending the Node.js community. The nodejs/node core GitHub repository is maintained by the Collaborators who are added by the TSC on an ongoing basis. Individuals making significant and valuable contributions are made Collaborators and given commit-access to the project. These individuals are identified by the TSC and their nomination is discussed with the existing Collaborators.

Information on how to contribute to the MySQL open-source project can be found at <https://community.oracle.com/tech/developers/discussion/4457821/contributing-code-to-mysql>. Before someone can contribute, they must sign the Oracle Contributor Agreement (OCA). Contributions are made through submissions on github.

1. Will the product scale to my enterprise’s requirements?

My project is a small web application to track workshops, participants, and equipment. There will only be a few users (primarily 2) and the size of the database will be relatively small. These open-source products definitely scale to my requirements.

1. Are there regular security patches?

All major releases of Angular are supported for 18 months. During the first 6 months, regularly scheduled patches are released. During the 12 months after that, only security patches are released. Node.js has monthly security releases. MySQL security patches are available every 3 months and are also included with each new release.