1. Position Identification

Position Number: 992221
Position Title: Application Developer
Department: McPherson Library Systems
Reports to: Head of Systems
Number of Direct/Indirect Reports: Direct 0 Indirect 0
Classification Level: SG 8
Last Updated: October 2017

2. Position Summary

Library Systems implements and maintains computing technologies supporting the Libraries' operational requirements and furthering its strategic goals. Operating within the framework established by University policy, Library Systems seeks to maximize the benefits of information technologies for librarians and staff, and all those whom we serve.

The Application Developer builds, extends, and customizes software applications providing access to the Library's digital collections and related information resources and services. This position may also be required to evaluate software, to recommend technical solutions, to deliver progress reports, to create documentation, and to consult with stakeholders to determine needs.

The Application Developer will work with the Library Systems Team, and under the guidance of the Digital Scholarship Developer, to analyze requirements and develop applications enabling researchers, students and the community to locate, access, and use the Library’s digital collections; and enabling library staff to effectively manage workflows relating to the production and curation of digital assets.

3. Key Responsibilities and Expectations

<table>
<thead>
<tr>
<th>Key Responsibilities</th>
<th>Expectations:</th>
</tr>
</thead>
</table>
| Digital library development 80% | • Web and application programming in support of open source digital library and digital scholarship platforms  
• Working closely with library and faculty stakeholders to analyze digital scholarship project needs and to propose technical solutions  
• Support and troubleshooting for platform users that includes creating documentation. |
| Linked data development 20% | • Custom programming to support linked data and RDF production in the library  
• Selection, implementation and troubleshooting of applications to support the work of linked data production including named entity recognition tools, visualization tools, and authoring tools  
• Triple store implementation and management and mastery of the SPARQL query language |
### 4. Classification Factors:

**Problem-Solving:**
Most of the work in this position will require significant problem solving and research. This position will be required to resolve problems that are complex and variable, requiring interpretation, evaluation and adaptation of procedures, policies and precedents and to develop new methods and procedures.

**Responsibility for Financial & Material resources:**
This position will be working within budget guidelines that are handed down from the AUL DSS and the Head of Systems. There is no signing authority for purchasing, however the position will be expected to identify system specifications, obtain quotes from service providers, and make recommendations for equipment and software purchases.

**Responsibility for Human Resources:**
This position holds no formal supervisory responsibilities, but is expected to provide informal direction and guidance or related systems orientation and training to other staff in the library, as required.

**Impact of Decisions and Actions:**
This position is responsible for producing secure applications that use server resources efficiently. Poorly designed software can affect the performance of key software systems leading to user frustration, and downtime. At its worst, badly written software can pose a significant security threat to university servers and networks. These responsibilities are shared with other library systems staff.

**Independence:**
This individual will engage in a great deal of self-directed learning and problem solving. The platforms on which s/he will be developing are new to UVic Libraries, and digital scholarship constitutes a major growth area for us. These are sophisticated and powerful software platforms that will run a significant number of diverse services.

Programming and development activities require significant personal and professional judgement, as there are few guidelines in place to direct this work. Each new application will require research, stakeholder consultation, planning, design, execution, assessment, and maintenance.

The position will develop and document best practices and procedures for the use of other library staff, and may provide direct end-user instruction. This individual will have a great deal of decision latitude in designing, building, and testing a variety of applications for public consumption.

Typical examples of decisions expected of this position would be:
- Deciding on the specific programming and software solutions to be used for a given project
- Scheduling and prioritizing duties/responsibilities
- Communication with end users, faculty members, library staff, and other depts. on campus

Final approval of major changes in processes or systems that affect the department as a whole (or multiple external departments) would typically require management involvement.

### 5. Summary of qualifications:

This position requires a Bachelor’s Degree in Computer Science or related discipline and 3 years of development experience in a Unix/Linux environment. In addition:

- Java, Python, and PHP programming
• Experience working with relational databases
• Experience using version control tools like Github or Subversion
• Demonstrated ability to work independently and as a member of a team
• Demonstrated written and verbal communication skills, including the ability to produce clear, detailed and precise documentation
• Demonstrated research and problem-solving skills

The following will be given preference:

• Programming experience in Ruby
• Experience working in Fedora Commons Repository based digital library platforms
• Knowledge and experience relating to semantic web technologies, including RDF and SPARQL
• Proficiency working with XML and related technologies
• Experience with search and indexing software such as Apache Lucene/Solr

<table>
<thead>
<tr>
<th>Employee’s Signature:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manager’s/Supervisor’s Signature</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>