Job Description

Moodle Developer   Grade: 8

Department: Digital Education (DigiEd)   Location: Bloomsbury Campus, London

Reports to:
Learning Applications Team Lead

Direct reports:
None

Context

UCL is a world-leading teaching and research university, often ranked in the top ten in the world with an annual turnover of well over £1 billion. Part of UCL's vision is to take on the hardest global challenges.

The Information Services Division (ISD) is the primary provider of IT services to UCL. We support and enhance learning, teaching, research and administrative processes by providing information- and technology-related services to over 50,000 staff and students of UCL and associated institutions.

Our ambition is to be the leading IT services group in the HE sector and we are growing our team's capability in experience/UX, agile development, security, cloud, service management and partnering. We are modernising our technology foundations, digitising the processes of the university to transform experience for students and staff, and partnering across the university to drive differentiation in UCL education and research.

Within ISD, this post is in Digital Education, UCL's hub for supporting, exploiting and enhancing the use of technology in education. High level group objectives are:

- Providing and enhancing core digital education and educational media services
- Supporting and spreading excellent practice

- Innovating and evaluating
- Developing fully-online learning capability and capacity
- Developing digital capabilities of staff and students
- Supporting digital accessibility

To this end a multi-team structure (Core Services, Educational Media, Advisory, Digital Learning Design, Futures, Digital Skills Development and Digital Accessibility) has been established.
This post is in the Core Teaching Platforms product team which has been one of the early adopters of Agile Ways of Working, automated testing, Docker, DevOps methods & pipelines and Public Cloud within ISD.

It is continuing its expansion into a fully multi-disciplinary product team with Moodle Developers, Learning Technologists and Analyst Developers (Ops) working together. After many years focused on infrastructure to handle ever growing usage and student numbers, the team is now focused on implementing new functionality and responding to user needs.

The team values being part of the open source Moodle community, providing feedback and fixes upstream wherever possible to new plugins we review and core Moodle. There is also a drive to publish our plugins for the rest of the community to make use of.

Main purpose of the job

- Working on plugins from the wider Moodle community, core Moodle and UCL plugins existing or new that are part of the university's core vision and strategy.

- Working within the Learning Applications Development and Support Agile Team using your software design and programming skills, including the use of PHP MVC frameworks, Behat, git, Docker, MySQL, JavaScript (and associated frameworks) and other emerging web technologies, in a Moodle environment.

- Take a lead on the development and maintenance of the Moodle based systems and provide key input into the development direction of the LMS.

Duties and responsibilities

Develop new functionality in tandem with the team, getting early feedback from the Learning Technologist throughout the sprints to ensure it fulfils the underlying requirements.

- Using Agile methods to ensure deliveries are planned and managed appropriately, working closely with the design leads to break down solutions into manageable pieces of work, and ensure we deliver the right components at the right time.
- Create a highly collaborative environment, to ensure the UCL-developed code meets the Moodle Coding Standards, demonstrate innovation with new technologies, own good working practices, solve problems and work as a member of an evolving team.
- As the Moodle Developer in the Learning Applications Development and Support agile team, you will work hand-in-hand with the rest of the team during sprints to fix bugs and implement improvements required for functionality change whilst being reviewed ahead of going live.
- Drive the development and maintenance of best practices, including delivery, coding and configuration, in line with the quality, regulatory and security needs of UCL. Whilst monitoring and assessing the core principles of collaboration, prioritisation, accountability, visibility, and self-management.
- Be a primary point of contact for technical escalation within ISD for incidents, queries, ideas or comments regarding the service.
- Responsible for implementing approved enhancements and features to the UCL Moodle environment.
- Lead on providing professional application life-cycle management, service process improvement and

solutions design for the institution's centrally supported Learning Applications.

Technical Leadership
- Provide technical leadership for projects and services as required. This may include, but not be limited to, the following:
  - Be the technical expert and make technical decisions as necessary.
  - Liaise with other ISD teams to ensure the production of User Interface designs that optimise user experience and ensure an appropriate degree of commonality across applications within UCL.
  - Provide planning information, estimates and task dependencies.
  - Direct the work of other developers on the product.

Knowledge Transfer and Training Delivery

- Where the post holder is mainly involved in Application Development, provide knowledge transfer to 3rd line support teams. Specifically,
  - Document application software to aid transition to the support team. This will include support and deployment documentation.
  - Provide knowledge transfer to the support team through a variety of methods such as briefings and documentation reviews.
- Where the post holder also provides 2nd line support to specialist applications, provide training development and delivery as part of the training virtual team. Specifically,
  - Perform training needs analysis for the specialist applications for which the post holder provides 2nd line support.
  - Develop training materials, presentations, screen shots, manuals etc.
- Deliver training in 1-to-1 or group settings as necessary.

Application and Software Release Management

- Provide a significant contribution to test strategies and plans as determined by the Moodle Testing Strategy.
- As the person responsible for software robustness, you will lead on all testing and make testing decisions.
- Perform fault fixes and make decisions on the best approach to issue resolution.

- Operate defined release management processes for both Preview and Staging/Production technical environments, specifically:
  - Efficiently managing the release of code through Source Code Management using Git and Docker into the live environments
  - Continuously deliver into a Preview environment to gather regular feedback during development.
- Implementing suitable safeguards such as user access controls to ensure the integrity of those environments.

Person Specification

Criteria	Essential or Desirable
Qualifications, experience and knowledge	
Knowledge and experience of working with and supporting impact assessment and facilitating high level solution designs for all functional and non-functional changes and implications of use within the Higher Education Sector	Essential
Knowledge and understanding of large-scale Learning Applications solutions such as Moodle and associated tools including Echo360 and/or digital media delivery and content management solutions	Essential
A detailed understanding of the different types of Moodle plugins and the range of functionality available to each type	Essential
Knowledge of key issues within the Higher Education Sector and appreciation of how these issues drive technology requirements	Essential
Programming experience with Moodle (PHP, JS)	Essential
Knowledge of software development lifecycle stages, including business requirements capture and analysis for both functional and non-functional requirements, development, testing and release using methodologies such as Waterfall and Agile and how these may be appropriately used to aid project delivery	Essential
Advanced knowledge and experience of web application security, performance and scalability	Essential
Advanced knowledge and experience in developing software applications using modern tools and advanced techniques. including knowledge of PHP, SQL, HTML5, CSS, Javascript	Essential
Advanced knowledge and experience using Git and Jira	Essential
Advanced experience working with Web Services and RESTful applications	Essential
Knowledge of remote working tools to enable effective remote working and collaboratively.	Essential
Knowledge and experience of SAFe productivity tools including Jira, Miro or Trello	Desirable
Experience with Ionic/Cordova or Hybrid Applications Development	Desirable
Experience writing PHPUnit and Behat tests scripts	Desirable
Contributed to Moodle Project, especially with code (core or plugin)	Desirable
Skills and abilities	
The ability to communicate clearly in speech and in writing and translate complex technical concepts for end users of all levels of technical competence	Essential
The ability to work effectively in a team environment, sharing knowledge and skills and developing productive working relationships, whilst organising your own workload to meet deadlines	Essential
An ability to provide realistic work estimation and planning information based on past experience	Essential
UCL Ways of Working for professional services	
Anticipating and avoiding potential strategic flaws and risks in plans	Essential
Taking pride in delivering an excellent service to colleagues, students, partners and the wider community	Essential
Managing multiple projects, leading regular reviews and making changes where necessary	Essential