JOB DESCRIPTION

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Job title	Software Engineer		
Job family	Technology, Systems & Delivery	Grade	7

Job purpose

Responsible for implementing effective software and tools for given designs.

Key responsibilities and accountabilities

- Develop effective software that meets given specifications
- Review and give feedback on others' code
- Write appropriate tests using automated test driven techniques for ensure code quality
- Integrate the software with monitoring and support tools
- Support system integration in its operating environment
- Write and review technical documentation
- Help to troubleshoot and resolve issues throughout the product life cycle, including out of hours support for incident resolution
- Participate in the team's agile planning and delivery process
- Effectively participate in the teams software development methodologies, such as pairing, code and documentation reviewing and continuous delivery
- Learn new technologies and keep abreast of existing technologies

Knowledge, skills, training and experience

Essential

- Demonstrable experience writing and maintaining robust production software
- Competence in one or more mainstream development languages and frameworks
- Competence with one or more mainstream development and deployment tool chains (IDE, SCCS, CI)
- Knowledge of the web architecture and key technologies (HTTP, DNS, distributed design)
- Competence in test driven development and broader testing & QA concerns
- Competence in developing for operational concerns (monitoring integration, performance testing, security considerations)
- Experience of project working and professional software development processes, including agile
- Effective collaboration within a team – ability to speak up, challenge, agree and commit

Desirable

- Experience of database design and use in software applications
- Takes responsibility for driving tasks to completion
- Understanding of designing & implementing for non-functional concerns
- Worked in a professional software development environment on several projects (including experience in testing, design and release)
- Experience of releasing their software to a production use case
- Participated in reviews and inspections of code (sat with a peer or someone more senior

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reviewing your code)
- Software Engineering or Computer Science Degree or equivalent

Job impact

Decision Making

- Reports to Principal Software Engineer or Software Engineering Manager
- Tasks are allocated to the job holder by the team lead
- Undertakes tasks independently
- Independently writes tests to check quality of code
- Assesses feedback from reviews and incorporates as appropriate
- Troubleshoots independently or with the support of others where necessary
- Contributes to the teams iterative and collaborative design and implementation decisions

Scope

Finance: No financial responsibility

Line Management: No line management responsibility

Ad-hoc Teams: Participates in departmental hack days and external ad-hoc events (typically 5 to 20 members)

Other information

For Reward team use only

Job Code	
Definition:	Content

This job description is a written statement of the essential characteristics of the job, with its principal accountabilities, incorporating a note of the skills, knowledge and experience required for a satisfactory level of performance. This is not intended to be a complete, detailed account of all aspects of the duties involved.

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Appendix

There may be sub-sets of the generic job described above which require additional technical skills. This appendix to the generic job description can be developed to cover such situations.

Division	Design & Engineering (R&D)
Reports to (title)	
Location base	Salford

Organisation structure	

BBC R&D works at the forefront of broadcast and media technologies. Our work focuses on research and development activities on a 1-5 year timescale and we are based in two main labs, one in London and one in MediaCityUK, Salford. Further information on current projects and collaborations being undertaken by Research & Development are available at: www.bbc.co.uk/rd.

In R&D we are considering the impact of full end-to-end content creation, production, delivery and consumption online. With this comes the opportunity to deliver just-in-time composition and hyper-personalisation via an approach we are calling 'object-based media'. There is also the possibility of new types of experience emerging given the capabilities of a purely object-based and wholly online provision.

The challenges of delivering a portfolio of these object-based media experiences to mass audiences are significant and interesting. To start, we are looking at how to leverage innovation in mass participative experiences and real-time rendering to give us a new view on our traditional role as a broadcaster. In particular we are researching the production techniques, tools and technologies used by the games industry to help us achieve the scalability and audience reach necessary to make these new variants and forms of content a success.

The goal of our current project, "Render Engine Broadcasting", is to broaden the types of experience an "iPlayer of the future" can offer by leveraging game technology and maintain the impressive coverage of compatible devices. The research we participate in will include demonstrations and reference designs for future architectures for the broadcast industry, should it move to adopt our object-based media ambitions more generally. This will necessitate a flow of ideas and knowledge between our work in this area and other organisations.

We will develop these software prototypes to research the economic challenges and technical viability of object-based media delivery at scale and a "one service" approach for content consumption. The project's long term ambition is to deliver technology that enables new services capable of immersing mass audiences in shared and personalised real-time interactive experiences.

Additional job specific responsibilities and accountabilities

We are looking for a talented Unreal Engine developer to join BBC R&D's Future Experience Technologies (FXT) team based in Salford for a fixed contract of 6 months. The FXT team focuses on the research and development of new user experiences and tools that revolutionise media production and consumption.

You will be responsible for writing software to test ideas and experimental scenarios using Unreal Engine to support research into Render Engine Broadcasting; a research project investigating how real-time rendering technology and the craft of authoring games can benefit the broadcasting system and help deliver the BBC's public purposes. This involves development of game engine middleware with an emphasis on targeting multiple platforms including consoles, televisions, web browsers and the cloud. This is an exciting opportunity to shape the future of media delivery and

consumption by working with other big industry partners on a collaborative research project.

Approval	
Manager	Name and job title
HR Business Partner	Name
Date	