

Assignment No. 4

Game Development

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Game Development

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Software Developers

A developer is an individual that builds and create software and applications. He or she writes, debugs and executes the source code of a software application. A developer is also known as a software developer, computer programmer, programmer, software coder or software engineer. ¹

Role

A standard Software Developer job description should include, but not be limited to:

- Researching, designing, implementing and managing software programs
- Testing and evaluating new programs
- Identifying areas for modification in existing programs and subsequently developing these modifications
- Writing and implementing efficient code
- Determining operational practicality
- Developing quality assurance procedures
- Deploying software tools, processes and metrics
- Maintaining and upgrading existing systems
- Training users
- Working closely with other developers, UX designers, business and systems analysts

Examples

A Java, C#, .Net, C, Sybase and Oracle Software Developer is generally responsible for the development, design and implementation of new or modified software products or ongoing business projects. Typically sitting within the IT team of a business, a Software Developer will be involved in liaising with the Business Analysts and Development Managers to ensure software projects meet requirements.

Software Publishers

A software publisher is a publishing company in the software industry between the developer and the distributor. In some companies, two or all three of these roles may be combined (and indeed, may reside in a single person, especially in the case of shareware). Desktop publishers use computer software to design page layouts for newspapers, books, brochures, and other items that are printed or put online. They collect the text, graphics, and other materials they will need and format them into a finished product.²

Role

- Gather existing materials or work with designers and writers to create new artwork or text
- Find and edit graphics, such as photographs or illustrations
- Use scanners to turn drawings and other materials into digital images
- Import text and graphics into desktop publishing software programs
- Position artwork and text on the page layout
- Select formatting properties, such as text size, column width, and spacing
- Check proofs, or preliminary layouts, for errors and make corrections
- Finalize formatted documents for printing or electronic publication
- Send final files to a commercial printer or print the documents on a high-resolution printer

Examples

Desktop publishers use publishing software to create page layouts for print or electronic publication. In addition to designing pages, desktop publishers may edit or write text. Some desktop publishers might be responsible for correcting spelling, punctuation, and grammar or for writing original content themselves.

Desktop publishers' responsibilities may vary widely from project to project and employer to employer. Smaller firms typically use desktop publishers to perform a wide range of tasks, while desktop publishers at larger firms may specialize in one part of the publishing process.

Desktop publishers work with other design and media professionals, such as writers, editors, and graphic designers. For example, they work with graphic designers to come up with images that complement the text and fit the available space.

Console Developers

Video Game Developers, also known as Game Developers, are responsible for designing and developing video games for PC, console, and mobile applications. Their job is to code the base engine from the ideas of the design team. They may also be involved in character design, level design, animation, and unit testing.³

Role

- Meeting with the design team to discuss game concepts.
- Contributing to the overall game concept and storyline.
- Generating game scripts and storyboards.
- Translating design ideas into functional game code.
- Coding the base engine of the game.
- Contributing to audio and animation design.
- Animating characters and creating levels.
- Developing game milestones and check points.
- Troubleshooting code and fixing bugs.
- Creating game specifications and designing expansion packs.

Examples

They are responsible for coding the initial base engine of the game, fixing bugs, and troubleshooting design issues. You may also be required to help develop storylines, characters, levels, puzzles, and contribute to the overall game concept.

To ensure success as a Video Game Developer, you should have strong design skills, in-depth knowledge of coding software, and the ability to work as part of a team. A top-class Video Game Developer expertly translates the ideas of the design team into a virtual environment that can be scaled and manipulated accordingly.

Tool Developers

The tools programmer will design, implement, enhance and ensure the proper functioning of the tools that will complete the engine possibilities and help improve the effectiveness of the production team. Developer tools (or "development tools" or short "DevTools") are programs that allow a developer to create, test and debug software. They let users inspect and debug the page's HTML, CSS, and JavaScript, allow to inspect the network traffic it causes, make it possible to measure its the performance, and much more.⁴

Role

- Compile and understand system development needs and assess their feasibility to enhance the production pipeline;
- Analyze existing features in the engine and available tools and suggest improvements by designing and implementing new systems whenever necessary;
- Support the features and systems designed for production: production workflows in the engine, plugins for third-party applications (3DSMax, Maya, source control, etc.) and productivity tools (compilation, build process, etc.);
- Analyze and correct the tools bugs determined by other working units and tools testers (and eventually the quality control team);
- Document the work to transfer knowledge and enable users (production) to understand how to use the systems and features;
- Carry out all other related tasks.

Examples

Individuals with the knowledge of;

- Ability to understand and account for user needs
- Autonomy and resourcefulness;
- Initiative;
- Problem-solving skills;
- Analytical and synthesis skills;
- Good interpersonal and communication skills;

- User oriented;
- Ability to work as part of a team;
- Ability to adapt to change;
- Results focus and attention to detail;
- Knowledge of C++, C#, Python, WPF, SQL, etc.;
- Knowledge of concepts in ergonomics.

Distributers

Responsible for the merchandising, distribution and selling of computers, software and peripherals.⁵

Role

- Recognize the needs of the consumer and provide detailed information to the consumer about the technical specifications of the computer software offered by the company.
- Investigates new items and makes recommendations for purchasing products.
- Checks inventory to ensure orders are in stock.
- Takes orders over the phone and in person.
- Advises customers on technical matters and recommends appropriate computer configurations.
- Solicits information about computer needs from customers.
- Negotiate price for the sale.
- Provide technical support after merchandise is purchased.
- Construct sales pitches and presentations.
- Travel to areas where needs are projected.
- Stay abreast of market trends.
- Assist with the company helpline.
- Serve as a customer service rep for customers who have questions or difficulties.
- Demonstrate product features before a sale.

- Respond to pre-qualification questionnaire or information to tender document.
- Negotiate a commercial agreement.
- Help customers maximize the use of software features.
- Advise on appropriate user training.
- Ensure quality of service by developing a thorough and detailed knowledge of technical specifications and other features of employers' systems and processes.
- Maintain awareness and keep abreast of constantly changing software, hardware systems and peripherals.

Retailers

It's a good to start your retail sales associate job description with a statement that acts as your company's marketing summary and describes your business. Take the opportunity to say something that makes your organization stand out from other employers.⁶

Role

- Serves customers by helping them select products.
- Drives sales through engagement of customers, suggestive selling, and sharing product knowledge.
- Greets and receives customers in a welcoming manner.
- Responds to customers' questions.
- Directs customers by escorting them to racks and counters.
- Provides outstanding customer service.
- Documents sales by creating or updating customer profile records.
- Manages financial transactions.
- Processes payments by totaling purchases, processing checks, cash, and store or other credit and debit cards.
- Alerts management of potential security issues.
- Assists with inventory, including receiving and stocking merchandise.
- Keeps clientele informed by notifying them of preferred customer sales and future merchandise of potential interest.

During Game Development Milestones, describe each stage/definition/version or what are goals achieved at this stage

Alpha definition

Alpha is the stage when key gameplay functionality is implemented, and assets are partially finished. The alpha phase of the release life cycle is the first phase to begin software testing (alpha is the first letter of the Greek alphabet, used as the number 1). In this phase, developers generally test the software using white-box techniques. Additional validation is then performed using black-box or gray-box techniques, by another testing team. Moving to black-box testing inside the organization is known as alpha release.⁷

Beta definition

Beta is feature and asset complete version of the game, when only bugs are being fixed. Beta, named after the second letter of the Greek alphabet, is the software development phase following alpha. Software in the beta stage is also known as betaware. Beta phase generally begins when the software is feature complete but likely to contain a number of known or unknown bugs. Software in the beta phase will generally have many more bugs in it than completed software, speed or performance issues, and may still cause crashes or data loss. The focus of beta testing is reducing impacts to users, often incorporating usability testing. The process of delivering a beta version to the users is called beta release and this is typically the first time that the software is available outside of the organization that developed it.⁸

Gold Master Definition

A gold master is a release candidate milestone which passes all of a publisher and platform's requirements. It is considered the finished game, locked and ready to be reproduced and sold.

Gold masters are not necessarily bug free, but bugs that they contain are generally not considered serious enough to block production. In older days when it was difficult to issue software patches for games (because of a lack of connectivity), publishers were often much less tolerant of bugs than they are today.

In online games the term is less widely used as those games have often already been released in the form of open betas to players.

Post-Mortem

A post mortem can have very various shapes, but it's, most of the time, a simple text document. Its main purpose is to keep track of the development of a game. It's the History of your game. The reality behind the scene.

You should see a post mortem like your very own fortress of solitude where you can always count on Jor-El to help you remember what motivated you and what made the actual shape of your game.

A post-mortem is a tool of the past helping you shaping a better future. Knowing why and how you did things before is a great way to learn from your own mistakes and do better next time.

Remember that it is not a marketing tool. It's not made to be seen by people not part of the development team. Like personal diaries post-mortems work best when they contain personal stuff (about the development, not about your secret love for Jenny. Nobody cares about your love for Jenny... even her. Sorry). Even if you can always publish them on the Internet, and even if they are a great source of knowledge to anybody who is interested in game development, remember that the main purpose is to make YOUR team stronger and learn from the past. It's not to communicate about your game in order to sell another copy or two.⁹

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