**Assessment Two - Brief**

The headmaster of Huckleberry High has asked you to build a five-page website to encourage students in the school to consider a career in Computing.

It must be appealing to all students aged 11 – 18, he would like you to make sure all the images promote inclusion. The percentage of females working in Computing is at an all-time low, so he would like you to make sure the site is not male dominated, as many are.

Students going on to study within the computing industry has declined over the last five years in his school and he is hoping that with all the information on one site he can motivate his students to pursue a career in Development. He would like the Salary information to be prominent on the page.

He does not have any colour schemes in mind and is happy for you to decide on the final design of the project.

**The five pages of the site are:**

Home Page – index.html

Full Stack Developer Description Page – fullstack.html

Games Developer – games.html

Front End Developer – frontend.html

Backend Develop – backend.html

**Each job page must include:**

* Images – At least two – Supplied/Source from legal sources
* Description of the job role - Supplied
* Average Salary - Supplied
* Previous student testimony – Supplied

Headmasters requirements — each page must:

* Include the name of the School on each page
* Include a testimonial from a previous student
* Use the information provided
* Include at least Two relevant images per page
* Include an external hyperlink on each page, except the homepage
* Include a link to the site’s homepage on each page, except the homepage

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| Full stack developer |
| Full Stack Developers are computer programmers who are proficient in both front and back end coding. Their primary responsibilities include designing user interactions on websites, developing servers and databases for website functionality and coding for mobile platforms. **Full Stack Developer Responsibilities:**  * Developing front end website architecture. * Designing user interactions on web pages. * Developing back end website applications. * Creating servers and databases for functionality. * Ensuring cross-platform optimization for mobile phones. * Ensuring responsiveness of applications. * Working alongside graphic designers for web design features. * Seeing through a project from conception to finished product. * Designing and developing APIs. * Meeting both technical and consumer needs. * Staying abreast of developments in web applications and programming languages.  **Full Stack Developer Requirements:**  * Degree in Computer Science. * Strong organizational and project management skills. * Proficiency with fundamental front-end languages such as HTML, CSS and JavaScript. * Familiarity with JavaScript frameworks such as Angular JS, React and Amber. * Proficiency with server-side languages such as Python, Ruby, Java, PHP and .Net. * Familiarity with database technology such as MySQL, Oracle and MongoDB. * Excellent verbal communication skills. * Good problem-solving skills. * Attention to detail.   **Expected Salary: £65k** |

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| Front End Developer |
| Front End Developers are computer programmers who specialise in website design. Front End Developer duties include determining the structure and design of web pages, striking a balance between functional and aesthetic design and ensuring web design is optimized for smartphones. **Front End Developer Responsibilities:**  * Determining the structure and design of web pages. * Ensuring user experience determines design choices. * Developing features to enhance the user experience. * Striking a balance between functional and aesthetic design. * Ensuring web design is optimized for smartphones. * Building reusable code for future use. * Optimizing web pages for maximum speed and scalability. * Utilizing a variety of mark-up languages to write web pages. * Maintaining brand consistency throughout design.  **Front End Developer Requirements:**  * Degree in Computer Science or related field. * Understanding of key design principles. * Proficiency with HTML, CSS, JavaScript and jQuery. * Understanding of server-side CSS. * Experience with graphic design applications such as Adobe Illustrator. * Experience with responsive and adaptive design. * Understanding of SEO principles. * Good problem-solving skills. * Excellent verbal communication skills. * Good interpersonal skills.   Expected Salary: £38K |

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| Back End Web Developer |
| Back-end developers are responsible for writing the web services and APIs used by front-end developers and mobile application developers.  A back-end web developer is responsible for server-side web application logic as well as the integration of the front-end part. Back-end Developer duties and responsibilities  * Be involved and participate in the overall application lifecycle * Focus on coding and debugging * Collaborate with Front-end developers * Define and communicate technical and design requirements * Provide training, help and support to other team members * Build high-quality reusable code that can be used in thew future * Develop functional and sustainable web applications with clean codes * Troubleshoot and debug applications * Learn about new technologies * Stay up to date with current best practices * Conduct UI tests and optimize performance * Manage cutting-edge technologies to improve applications * Collaborate with multidisciplinary team of designers, developers and system administrators * Participate in conferences and educational programs * Follow new and emerging technologies  **Back End Developer Requirements:**  * Proficiency with Python, PHP, Ruby on Rails, SQL & API’s. * Understanding of server-side – HTML, CSS & JavaScript. * Good problem-solving skills. * Excellent verbal communication skills. * Good interpersonal skills.   Expected Salary: £45K |

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| Games Developer |
| Game developers work on teams to plan, design, and produce video games for computers, mobile devices, or game consoles. Their work involves creating visual content for the game and writing code to implement all the game’s features and functionality. This career requires a background in software development and mathematics and the ability to collaborate well with others to accomplish project goals. While many work full-time hours in game studios or at software companies, opportunities exist for game developers who prefer to work remotely or to self-publish their games online as independent developers. Game Developer Duties and Responsibilities Game developers work in a variety of organizations. Specific duties and responsibilities may vary, but there are several core tasks associated with the job, including:  **Plan Game Projects**  After receiving the game’s specifications and feature requests, game developers plan its storyline, characters, environment, activities, scoring, and progression. They break the project down into smaller parts for the team to handle, create schedules with estimated timelines, set milestones, and create prototypes.  **Design Games**  Often coordinating with dedicated visual designers, game developers use computer applications to make 2D and 3D models of game assets, including scenery and characters. They also create graphics for game art and maps. This includes animating the characters and designing any virtual reality environments used.  **Write Code**  Using programming languages suitable for the game’s target platform, game developers write the code that implements the game’s logic and allows the player to interact with the game world and its characters. This often involves having responsibility for specific parts of the code or game features and working with other developers to make the final product.  **Test and Debug Games**  Testing and debugging occur during the development process and after the game ships to players. Game developers use their eye for detail and automated testing tools to check for broken features and functionality, inspect their code for errors as they write it, and handle requests to fix performance and reliability issues.  **Maintain Game Projects**  After production, game developers continue to handle new feature requests and make improvements to the game. This can include producing add-ons and game packs, making updates that introduce new levels and characters, and adding online gameplay functionality.  Game Developer Skills and Qualifications Game developers need creativity, artistic ability, and technical skills to make interesting games that look and run well. Employers often require them to have a bachelor’s degree in a computer science field and up to five years of experience in game programming, game design, or software development. Strong candidates usually also possess these skills:   * **2D and 3D design** – while game designers sometimes help create designs for them, game developers still often work with 2D and 3D design tools to create game assets and implement existing assets into the game * **Programming** – depending on the game’s intended platform, game developers write code in Java, C+, C++, Python, Swift, JavaScript, or other programming languages * **Analytical thinking** – game developers analyse the requirements their employers give them to determine how to implement designs and write code for a functional game * **Problem-solving skills** – they need to think critically to solve problems when debugging problematic game code, optimizing game performance, and turning their design ideas into code * **Organization skills** – collaborating with game designers and other developers to complete projects successfully and on time requires an organized person   Expected Salary: £42k |

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| Student Testimonials |
| Index Page  **Nicole**  **Degree:** Bachelor of Computing Science  **Current position:** Software Engineer  The Computing Science degree was not an educational path I originally looked for - it found me. After my first course in the Computing Science program, I never looked back.  There are a variety of things that made my time at TRU worthwhile and helped me achieve my goals. There is a wide range of courses that involve not only technical understanding of course material, but applied learning as well.  “Getting your hands dirty" in the software, hardware, and languages being learned assisted me to gain a stronger understanding of important material. |
| Full Stack Developer  Jake:  "In a full stack web development role, you need to know how to code. You build a website that goes down onto someone’s browser and you’d also build the program that sits on the server that sends out that web page.  "There’s been kind of a tradition of splitting the two skills up so a company would have a front-end developer and a back-end developer. The cost of salaries in this field is quite high so from an employer's perspective, by combining the two into one role, you’re able to hire one developer instead of two. |
| Front End Developer  **Francis:**  After going back to studying in my 30’s I became qualified as a font-end web developer. It has changed my life, I am able to work remotely allowing me plenty of time to spend with my family. |
| Games Developer  Monique:  I was always a gamer but never really thought about creating one myself. I had played around online with some free software and realised that I really enjoyed it. I applied to college then went on to University where I got my degree. I have now been working in the industry for four years and absolutely love my job. |
| Back End Developer  Curtis:  I was always interested in computing in school so decided to go to University to further my knowledge. I didn’t have the best interpersonal skills and felt uncomfortable speaking in front of people. I really enjoy the challenge of developing complex code. Working as a back-end developer I don’t need to speak with clients as often. |