SoftAware

SoftAware takes the hassle out of learning and developing with programming languages by providing an online suite that handles all aspects of developing software/programs. We provide a platform for students and novice users to quickly begin developing and learning using a language of their choice while abstracting away details of building their code/projects. It is a web platform using cloud storage for saving projects and programmes allowing them to be accessed anywhere from any device at any time. Users can learn rapidly without worrying about the capabilities or requirements of their device.

SoftAware has a simple graphical interface for creating and editing files in the cloud in real time. Programs can be run and tested at any time. We are reducing the barrier for students and novices to learn new technologies and programming languages and helping people around the globe get their dream jobs and degrees in a time efficient manner.

SoftAware not only limits itself to personal projects but also supports group collaboration. Multiple people can simultaneously edit source files all at the same time without disruption. Version control is provided de facto for all files in our cloud, so you will never have to worry about forgetting to save your changes or worse, someone over writing your work !

Developing projects has never been as easy, simply visit the SoftAware website using your preferred browser, log in with your credentials and continue developing.

SoftAware is a web embedded application. Students as well as amateur/casual developers can use it to keep all their project files in the same place without having to worry about whether the machine they are using has the necessary compiler, text editor, libraries installed etc. They will simply have to log in using their credentials through a web browser and everything necessary for their project will be available and further development can continue.

The Team

**John Harding Programming Language Specialist  
 Bachelor's Degree Computer Science**

John Harding has been a very succesful systems software developer, having demonstrated his success and drive by earning the role of senior software developer for Arista Networks, having graduated from college only 3 years previously. His knowledge of the C and Java programming languages is exceptional and has excellent experience and familiarity with the compilers of these languages as well.

John left his role at Arista 1 year ago to join us at SoftAware and his knowledge and enthusiasm has been hugely noticeable. He is currently working with the servers that we purchased and is working closely with our backend developer to co-ordinate the compiling and executing of programs on our servers as well as processing the output for sending back to the web page.

**Peter Orwell Front-End Developer  
 Bachelor's Degree Computer Science**

Peter joined the team at SoftAware 2 years ago, when this project began. Before joining SoftAware, Peter previously worked as a front-end web developer for Shutterstock, creating, developing and implementing new front-end website features. He has succesfully met all goals that we have set in the past 2 years. Whatever the challenge or deadline, Peter will get it done.

He has succesfully implemented the live text editor for programming, the collaborative text-editting feature as well as the user interface for the file management. He is a key member of the team and has been with us since the start.

**Conor Long Front-End Developer  
 Bachelor's Degree in Computer Science**

Conor is the newest addition to our team at SoftAware, having only graduated last year Conor has demonstrated his interest and enthusiasm for learning and will also be a key employee for our relationships with Societies in Trinity College. He has previously held committee positions in the computer science society as chairperson and the events officer for the net society. Since first year this man has tirelessly worked to develop his skills in programming and web development securing internships during the Summer of 2nd and 3rd year as a Software Engineering intern. He is the first in the door every morning and the last to leave, he is extremely eager to learn from Peter and they are working together very closely.

He has arranged to give talks with the societies that he was a committee member and popular figure within in his college about careers in software development and securing your first internship. We will use this opportunity to spread our name among the computer science students in the college by giving out free merchandise such as stickers, phone covers and water bottles.

**Niamh O'Connor Back-End Developer  
 Master's in Computer Science**

Niamh has been working with us for the past year as a back-end developer. Niamh did an integrated masters prgram in Trinity in which she did an industrial placement for 6 months with us. She subsequently returned to college to finish her Master's program in which she completed a dissertation on the topic of server concurrency and efficiency.

Niamh returned to us after completing her Master's degree and is using the knowledge she has gained through her research to implement efficient solutions on the limited hardware that we have at the minute. Niamh has succesfully implemented her theoretical knowledge by achieving 30% throughput increase on our server hardware. She is an invaluable employee for scaling our product. She has also been awarded an award for women in STEM by the Students Union and has been a role model for many women in STEM subjects during her latter years in college.

**Caolan Barry CEO  
 Master's in Computer Science**

I am chief excecutive officer for SoftAware. I had the idea for this company 2 years ago while working for a company that provides front-end marketing services to other companies. I saw the potential for web applications to abstract the details of IDE's and developer tools that were unnecessary for learning and developing your first projects. After meeting with Peter, we both left our jobs and began focussing on SoftAware. I oversee all aspects of the company for the moment as we are still small and this isn't very difficult to manage. I am also trying to attract new employees to join us as well as conduct the interviews for these candidates.

We are currently interviewing and reviewing applications for another back-end developer to work alongside Niamh and the programming language specialist to implement the program compilation, execution and output parsing stage of the service. We aim to make a decision by next week.

The team that we have at the minute has a diverse enough range of experience within the software industry that we have overcome any issues that we have encountered thus far. This team has been enough to develop our minimum viable product which we will be shipping live in one month time.

The Future of The Team

The team of developers that we have at SoftAware will need to grow after we have shipped our first live product online. We will need to employ a head of marketing, a head of quality assurance and also more developers for when we need to scale the permitted traffic to meet the amount of traffic that we are recieving. I am currently posting job openings on websites to attract employees to join us for when the product is live.

**Head of Marketing**

As I come from a very technical background, spending most of my professional career working in software development, I am aware that my familiarity with marketing strategies is minimal. The positon of Head of Marketing is intended to fill this skills gap. They will be responsible for the decisions of marketing campaigns, purchasing the merchandise and also will be working with the front-end developers to ensure the UI/UX is satisfiable.

**Quality Assurance**

Quality assurance employee's will be involved in rigorously testing our product to ensure satisfiability as well as to discover any unforeseen issues that havent been found by testing. In order to keep costs low, I intend on offering computer science students internship positions as a quality assurer with us. Their opinions on our student campaigns and pricing will also be valuable insights as this is our target market.

**Developers**

More developers will be required for expanding our language capabilities, we also need more front-end and back-end developers to support the developers we have at the minute and to continue developing features that the customers want.

The team I am assembling for SoftAware includes developers with experience across the full spectrum of software development as our service will require experienced professionals in each language/technology that we are providing. A greater emphasis and a larger amount of web developers will be required as this application will be fully contained and accessed through a browser. We will also require a lot of backend developers to work with the team as these will be providing the functionality of compiling and running the user’s programs and sending the results back to their webpage.

Market Analysis

SoftAware is currently disrupting the market of hosted collaboration platforms and we are emerging into our own market of web-based collaborative software development tools.

The similar markets that we are targeting are web-based hosting services for version control. Github dominates this industry and we are not looking to replace that and acknowledge that students having a basic understanding of Git and using github with other collaborators is an important part of industry and also can be necessary for succeeding in an interview process.

However, for many projects with a small number of developers working on a relatively small number of source files (about <10 but there’s no limit), me and my colleagues agree that most of the time it’s not entirely necessary. We hope to get students on board who find Github cumbersome and a frequent waste of time for projects and assignments that don’t require multiple branches.

**Github was acquired by Microsoft in June of this year for US $7.5 billion.**

The target market for SoftAware will be students and novices of programming/software development who are either doing assignments for their college education or are developing projects to gain experience to get their first job as a developer. It could also be used by employees wanting to upskill and pursue a career in software development.

The size of this market will grow as more college degrees incorporate programming aspects into their degrees such as in Mathematics and the Sciences. Me and my colleagues have also seen first-hand and from our immediate respective friend groups, the emphasis employers are placing on employees without any knowledge of programming to upskill. People in this position may easily get disenfranchised attempting to figure out how to use an IDE correctly and may just give up. This is why we believe our product will differentiate ourselves from others.

Our business will combine different elements of pre-existing services such as the version control and group collaboration that git & Github provides while extending that and removing the terminal commands that git requires as well as providing an environment for editing code in a text editor window and having a terminal section that will return the programs output. SoftAware will be a less sophisticated development environment targeted to be usable by anyone who is at all familiar with programming. When it reaches the market, it will serve the masses for easy validity testing, prototyping and an environment to keep all assignments in the same place.

Other online platforms like “codechef” also provide online interpreters/compilers and allow users to run programs within their web browser however it doesn’t support cloud file hosting of source files rather it always has a blank a slate for writing programs. We hope to utilise this similar concept of taking a user’s text input in the browser, send it to a back end server where it will be compiled/interpreted and then subsequently execute that program and send the terminal result back to the front end of the browser for the user to see. Another extension of this functionality that we could provide would be time of execution that may be important for a student studying algorithms for example.

Finally, one of the most elegant selling points of our service is the live collaboration that we provide. We provide the first service to provide real-time code collaboration in a web application. Think of the Google Docs for source code. This has been a recent feature that other popular text editors have extensions in development for, although none of them are contained entirely online.

//Define market, market share, size (revenue)

//Over time + projections

//Mean growth rate.

Strategy

Currently at the minute we are preparing for our first live product launch which will be in one months time. The launch date will coincide well with when Conor is visiting Trinity to speak to students. We plan on running competitions for those who sign up on the day. We also plan on running other competitions on Twitter, Facebook and Instgram to spread our brand awareness for our product. Marketing videos demonstrating the ease of beginning new projects and running them shortly after will be used for advertising on Instagram and Facebook targetted at those who search computer science related questions as well as those searching for git resolutions such as "how to merge branch in a git repository" etc.

Our goal is to reach 1,000 users after our first month of the product going live. After this stage, we will be investing in more server space for scalability of the service as well as rolling out new features to hold the interest of the user base. We believe this goal is certainly attainable and will leave a long lasting impression on those that use it. In order to increase our user base, we will need to retain those that are currently using it as well as expand the user base to those that have never used it.

**Retaining User's**

Our goal to retaining user's is by adding extra functionality to the service at a regular interval. We are aiming to do this monthly and will also send a monthly newsletter to those subscribed to the product detailing the new support for languages/frameworks/technologies that we have succesfully added. Bug fixes and scalability improvements will be fixed when we fix them.

**Expanding the User Base**

Our goal to expand our user base is similar to how we are initially planning to attract user's, we hope to develop relationships with colleges similar to the one we have with Trinity at the minute. We will have different employees visiting colleges to give speeches as well as to speak about the internship positions we have available if we get the necessary permission. We will also hand out merchandise for visibility on campus. We will contiune with our student marketing campaigns and competitions to subscribe as many as we can to the service.

**Subscription Service**

The service will be a subscription based service. All features are avialble for those subscribed to the service, we will offer one month of the service for free so that users can try the product and begin their projects and assignments on our service. After that the service will cost €7/month. We believe when students begin using our service for their projects and assignments, they won't want to revert back to having seperate IDE's and environments for different languages and will remain subscribed after the trial has ended. With subscription services defeating their pay-per-unit counterparts in the market of online content streaming such as for films and TV shows (Netflix, Amazon Prime) as well as for music (Spotify, Apple Music), we believe a subscription based service provides the lowest amount of risk to the user and users will be most willing to pay for these services rather than large upfront payments for a product they haven't had time to try.

Those who have utilised a free month trial will remain on our newsletter list for further updates and developments to our service and will be invited to resubscribe.

We are also conscious of the capabilities of our employees to provide a revolutionary software development experience and we would consider having a tier'd subscription service in the future

**Github is a popular service for uploading ones git repositories online s**o that they can pull it, edit it and push it using different machines such as a personal laptop, personal desktop, college desktop etc. It is used by students to collaborate on projects while keeping the files necessary in the cloud and readily available. Our service will not only provide version control for source files such that Github provides as well as repositories for groups to collaborate on, we will provide this without the user ever having to pull their repository to their local machine for building, testing, developing etc. as this will all be available on our service. This will eliminate the cost of novices forgetting to push their commits or having to figure out how to merge their commits.

SoftAware aims to provide Google Docs level of collaboration to source files by having all files contained only within our service in which two or more contributors can simultaneously edit different sections of a source file if needs be. This further aims to remove the hassle caused by merging git branches and rolling back changes, our service will regularly at intervals (every 5s for example) save the updated changes. Contributors to the repository can then revert their file back to an older version if needs be while the newest version will still be saved and can be accessed.

**SoftAware will attract students that have small assignments across a broad range of programming languages such as Java for algorithms, C for systems programming, HTML for web dev etc. At this level of development, students need not worry about the nuances of the compiler, large IDE’s with heavy boot times that contain full debug kits and a large amount of support for industry level software development. The focus of the students attention should be on the source code and solving the problem at hand which our service will guarantee that time won’t be wasted elsewhere.**