Sprint 1 Retrospective

Team 16 - xpac

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• What went well?

‣ **User Story #1:**
As a user, I would like to have the ability to connect to the server which hosts repositories.

#	Task Description
1	Set up client class with basic functionality.
2	Set up server class with basic functionality.
3	Set up server socket on the server side to accept client connections.
4	Set sockets on the client side to set connection to a given server on a given IP address and port.
5	Define the protocol for the server and the client to interface over the network.

‣ **Completed:** The client and the server connect flawlessly and are able to communicate over the given protocol.

‣ **User Story #2:**
As a user, I would like the server to establish multiple connections with clients, concurrently.

#	Task Description
1	Set up communication protocol to handle multiple clients.
2	Set up a multi forked server that is able to manage connections with multiple clients.
3	Set up the server to spawn new child processes to do requested file fetching tasks for each new socket connection.

‣ **Completed:** The server is forked in order to be able to accept multiple connections with different clients flawlessly.

‣ **User Story #3:**
As a user, I wish to be able to send and receive files to and from the repository.

#	Task Description
1	Set up client to connect to the server, interfacing with the defined protocol.
2	Set up server to connect to multiple clients, interfacing with the defined protocol.
3	Set up the client to receive multiple files over the given server socket.
4	Set up the client to install the given binaries in the given user's system.

‣ **Completed:** The server and the client are able to communicate over the internet over the protocol defined, accomplishing the task by flushing blocks of fixed sizes, in order to exchange multiple files and binaries.

‣ **User Story #4:**
As a user, I want xpac to be able to install packages on my system.

#	Task Description
1	Set up client to manage root access by the user in order to install packages.
2	Set up client to install packages sent by server to the user's systems.

‣ **Completed:** The client is able to communicate over the multi-foked server and is able to effectively install packages in the user's system, while responsibly managing root access.

‣ **User Story #5:**
As a user I would like xpac to efficiently manage my packages.

#	Task Description
1	Set up metadata class by defining the required metadata for each and every package.
2	Set up server repository schema to optimize package database schema.

‣ **Completed:** The bare foundation of the metadata class has been established and is working; integration of the client with the metadata class will be accomplished in the next sprint. Also, the server has an effective repository schema in order to serve multiple clients efficiently.

‣ **User Story #6:**
As a user, I would like to have access to proper software documentation, like man pages for xpac.

#	Task Description
1	Set up proper man pages and documentation for xpac.

‣ **Completed:** Man pages and code documentation have been implemented in the project.

‣ **User Story #7:**
As a user, I would like xpac to have an online presence to be able to to connect with the community of contributors and other users.

#	Task Description
1	Set up a landing page for the project.
2	Make the landing page clear and concise, so that it includes instructions on how to install and use xpac.

‣ **Completed:** The landing page for the project containing installation instructions has been set up and is functional at http://www.xpac.tech/.

• What did not go well?

‣ **User Story #8:**
As a user I would like xpac to efficiently manage my packages.

#	Task Description
1	Set up functions to compress and decompress metadata by working on common compression algorithms.

‣ **Not completed:** We were unable to implement the logic or libraries for compression/decompression due to time constraints and insufficient implementation for the base class for metadata.

‣ **User Story #9:**
As a user, I wish to be able to list all the packages that have been installed by xpac.

#	Task Description
1	Set up client to store and list all the packages available.

‣ **Not completed:** Since the base logic for the metadata class did not pan out, we were unable to flush metadata through the sockets, and therefore were unable to accomplish this user story in the first sprint.

‣ **User Story #10:**
As a user, I would like xpac to have a way to connect to the developers in order to submit valuable feedback and necessary critiques and comments about xpac.

#	Task Description
1	Set up an IRC server for the users to be able to connect to the developer community.
2	Set up a feedback form where users can submit valuable feedback and bug reports.

‣ **Not completed:** We could not get the IRC server to function in this sprint as we were unable to invest time in research and implementation due to constraints.

‣ **User Story #11:**
As a user, I would like xpac to be a stable and robust piece of software.

#	Task Description
1	Set up unit testing for server.
2	Set up unit testing for client.

‣ **Not completed:** We were unable to implement unit testing for client and server during this sprint as our software during this phase is specialised to perform a certain set of tasks. As our feature list grows to include more generalisation in functionalities, we will add unit testing for various working components of the product in order to ensure stability and robustness.

• How should you improve?

We need to estimate the amount of work we will be able to accomplish more accurately during the sprint planning phase. Some features depend on other feature being implemented beforehand, therefore they cannot be started simultaneously. This leads to a bottleneck in production and consequently, wastage of time. We need to focus on the basic functionalities first so that the project stays on track.
Also, we need to distribute the work between the team members in a way that each person can work according to their strengths and make a more impactful contribution to the project. Finally, clear communication between the team members will go a long way in helping us achieve our goals in the next sprint.