**Project Checkpoint Report**

**Project Name:** ATM Simulator

**Phase:** 3 (ATM operations implementation)

**Checkpoint:** 2

**Team:**

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Role: ATM Programmer

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Role: Bank and Customer Programmer

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Role: GUI Programmer

**Project Report:**

Some progress has been made since the last checkpoint, but not very much. The most significant objective accomplished for this checkpoint was that the interfaces for all entities have been implemented. That is, a Customer entity (Customer.cs) can interface with an ATM object (ATM.cs) to communicate with the central Bank authority, performing operations. While not all operations are in place, an Account system has also been created, which manages individual user accounts and their unique balances. The Bank (Bank.cs) keeps track of all accounts by loading them externally at the start of the application’s runtime. A very barebones GUI form using C#’s built-in Windows Forms is also in place, though it needs to be updated to reflect the activities of the ATM itself.

Unfortunately, there is still a significant amount of work to be done. The major operations of the ATM still need to be implemented, such as withdrawing, depositing, transfer of funds, and account authentication. The special cases (out of money, out of paper, etc.) naturally will also have to be looked after, as well as testing during the final phase right up to the project deadline. Finally, the rest of the GUI will also need to be updated to reflect the ATM and perform its internal operations based on user input. Since midterms are coming up and the homework load will decrease significantly, we will be able to have a lot more time to afford to this project by far. All of us have been swamped with math and programming assignments/projects for other classes, so it is much needed.

Going forward, the team will be meeting more often to compensate for the fact that we have had difficulties in getting more of the project done due to our other responsibilities. While we typically only meet when class is in session, we hope to meet once every 2-3 days to discuss the project and even have work sessions with one another on making sure everything is clear and doable before the final deadline.

**Process Report:**

As noted earlier, the biggest obstacle to our team making progress was other classes or responsibilities taking up our time. The first milestone for our game class happened to be during the middle of this checkpoint, so half of our time was spent working for the deadline in that class instead on our respective game projects. After that, we had to catch up on assignments for other classes the following week, which left only a day or two to actually do much of anything for this checkpoint. It’s unfortunate, but it happens. To remedy this, we are planning on meeting more and working together going forward, and will have time to dedicate solely to the project alone. At the very least, we managed to get everything essential to interfacing in.

Another problem that persisted over the last checkpoint – a direct consequence of the first one – is that we barely had time to talk to one another in the first place about the implementation details behind the design of the ATM simulator. In theory, the details are very simplistic, but the fact remains that we do not really know the exact strategy of doing things beyond our design plan until we put together more of the implementation, and can see directly how to accomplish the design goals. Communicating more will help with this (as outlined above), but it is mostly a matter of diving in and getting a lot more significant work done in the upcoming weeks.

Finally, the team structure may be suffering a bit from the lack of leadership we have. Our entire team is very passive in terms of personality and role, which is not a bad thing inherently. However, the lack of guidance has put us in a somewhat “aimless” situation, where no one is clearly guiding us. Despite getting out of his comfort, Andrew will be trying to remedy that by giving the rest of the team clear objectives and tasks to get done by set days, so that work will get done and everyone feels a bit less muddled on the immediate tasks they need to do.