CSC 249 – Networks

Project 2 Final Submission – November 8, 2023

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# Part A: Server Design

My bank server submission extends the instructor-supplied Python bank server implementation, and also satisfies these project design requirements:

*(Replace each occurrence of ‘?’ in square brackets below with either* ***Y*** *for YES or* ***N*** *for NO.)*

[Y] Supports multiple simultaneous ATM client connections.

[Y] Communicates with ATM clients using a message protocol of my own design.1

[Y] Validates an account's PIN code before allowing transactions on that account.

[Y] Allows only one ATM client at a time to access the same bank account.

[Y] Transmits error results to the client using numeric codes.

[Y] Takes reasonable steps to block attacks from malicious client applications.2

# Part B: Client Design

My ATM client submission extends the instructor-supplied Python ATM client implementation, and also satisfies these project design requirements:

*(Replace each occurrence of ‘?’ in square brackets below with either* ***Y*** *for YES or* ***N*** *for NO.)*

[Y] Communicates with the server using a message protocol of my own design.1

[Y] Validates customer-supplied account number and PIN before allowing any banking transactions.

[Y] Does not allow a customer to overdraw their bank account.

# Part C: Message Protocol Specification

*(Replace ‘?’ in square brackets below with either* ***Y*** *for YES or* ***N*** *for NO.)*

[Y] I have submitted a document that specifies my client-server message protocol using Augmented Backus–Naur form (ABNF). My ABNF specification is consistent with related material discussed in class on October 31.

# Part D: Extra Credit

*(Replace ‘?’ in square brackets below with either* ***Y*** *for YES or* ***N*** *for NO.)*

[N] I have completed additional technical work that is significantly beyond the original project requirements. I would like this work considered for extra credit points.

If submitting work for extra credit, describe the work performed:

N/A

# Notes

1 The implemented client-server message protocol is consistent with protocol design expectations discussed in class on October 24 [[slides](https://docs.google.com/presentation/d/1SXuFtMQ73OlJCRXsTOYP0BlDc_AmlG61/edit?usp=drive_link&ouid=100369230704758336835&rtpof=true&sd=true)].

2 Steps taken to block server attacks are consistent with expectations discussed in class on October 31 [[slides](https://docs.google.com/presentation/d/1SzCVFzi99cCSqP9Y_yoY9i2oJiklIpOy/edit?usp=drive_link&ouid=100369230704758336835&rtpof=true&sd=true)].