**Winter-2024 Semester**

**COMP 350 (User interface Design Programming)**

**Project File Report**

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Submitted to:

Prof. Kyungjae Lee

# **ACKNOWLEDGEMENT**

Professor. Kyungjae Lee,

I hope this letter finds you in good health and high spirits. I am writing to extend my heartfelt appreciation for the invaluable opportunity you have provided me with in the User Interface Design and Programming course. Your dedication to teaching and your passion for the subject matter have made a profound impact on my learning journey.

I am particularly grateful for the chance to work on a project utilizing the Java Processing development environment under your expert guidance. This experience has not only enhanced my proficiency in programming but has also deepened my understanding of the principles underlying effective user interface design.

As someone with a keen interest in the intersection of technology and human-computer interaction, delving into projects within the Java Processing environment has been incredibly enlightening. The flexibility and versatility of Java Processing have allowed me to create visually engaging and interactive user interfaces, while the real-time feedback provided by the environment has facilitated rapid prototyping and iteration.

Through hands-on exploration and experimentation, I have gained practical insights into how to create intuitive and aesthetically pleasing user interfaces, all while harnessing the power of Java for dynamic and interactive applications. Your guidance in navigating the intricacies of Java Processing, from understanding key concepts to troubleshooting code, has been instrumental in my growth as a programmer and designer.

Your meticulous attention to detail and your ability to elucidate complex concepts in a clear and concise manner have been instrumental in my grasp of the material. Your encouragement to think critically and creatively has empowered me to approach challenges with confidence and ingenuity.

Furthermore, I am grateful for the supportive learning environment you have cultivated within the classroom. Your approachability and willingness to offer guidance and assistance, both during class sessions and office hours, have fostered a sense of camaraderie among students and facilitated collaborative learning experiences.

In reflecting on my journey through this course, I am deeply appreciative of the knowledge and skills I have acquired under your mentorship. Your unwavering commitment to the success of your students is truly commendable, and I feel privileged to have had the opportunity to learn from someone as dedicated and inspiring as you.

Thank you once again, Professor Lee, for your exceptional teaching and mentorship. Your guidance has been invaluable, and I am confident that the lessons learned in your course will continue to serve me well in my academic and professional pursuits.

Warmest regards,

Ibadatt Singh Aulakh

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# **ABSTRACT**

**Main Sketch:**

A screenshot of a game

Description automatically generatedA cartoon character with a green background

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* The user has the ability to move the car with the keys “a,w,s,d”.
* Gradually a car from the opposite direction would come.
* If the car you control can dodge the car in red the speed will increase gradually.
* Else the screen with the message game over will be displayed.

# **SUMMARY**

Setup:

The canvas size is set to 1080x720 pixels.

The rectX variable is initialized to the width of the canvas, and an instance of the primary\_car class is created.

Draw:

The background() function sets the background color to a light green shade.

The moving rectangle's x-coordinate (rectX) is continuously decremented to simulate movement across the screen.

A series of rectangles are drawn as part of the user interface design, and the canvas is translated to create a scrolling effect.

The primary car is drawn using methods from the primary\_car class, including drawing the car's body and wheels.

Collision detection is performed to check if the primary car collides with the opponent car.

Functions to control the primary car's movement (controlCar()) and manage the opponent car (call\_opponent()) are called.

Human Model Class:

This class defines methods to draw a human figure as part of the game's user interface design.

Various body parts such as arms, legs, face, ears, eyes, nose, and smile are drawn using shapes like rectangles, ellipses, and arcs.

Primary Car Class:

This class extends the human\_model class and is responsible for managing the behavior and appearance of the primary car.

It defines properties like position, speed, and collision detection.

Methods are provided to draw the primary car's body and wheels, control its movement, handle collisions with the opponent car, and manage the opponent car's behavior.

A screenshot of a computer program

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A screenshot of a computer

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A screenshot of a computer

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A screenshot of a computer

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A diagram of a system

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