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| Drive Full Name | Oreoluwa Adebusoye |
| Partner Full Name | Andrew Leimbach |
| Student ID | 1883626 |

Reflection

In this lab, I aimed to enhance my understanding of several key programming concepts, particularly in the context where the score is determined by the distance traveled after skiing down a ramp and into the air. The objective was to calculate the distance based on speed and determine the points awarded for that distance. To solve the problem, I followed a series of steps that involved gathering user inputs, setting parameters based on the hill type, and performing mathematical calculations using the math module. I implemented decision-making structures to handle various scenarios and ensured that the output was user-friendly and clear. Additionally, my partner and I created a flowchart to visualize the program's logic and identify control paths.

During the process, I explored key concepts such as utilizing the math module for calculations, using control structures to facilitate decision-making, and implementing input validation for improved usability. The results of my program matched my expectations, as it accurately calculated distances and points based on the provided inputs. I tested various scenarios, including edge cases like zero speed and extremely high speeds, to ensure the program functioned correctly in all situations.

However, I encountered challenges, particularly in figuring out the algorithm needed to calculate the distance and corresponding points. To overcome this, I sought help from Dr. Zee, who provided valuable insights into the mathematical aspects and overall logic. Additionally, collaborating with my partner allowed us to brainstorm ideas and troubleshoot together, which clarified our thought processes and led to a more coherent algorithm. Through this experience, I learned the importance of robust input validation and error handling, as well as the value of visualizing program logic through flowcharts. Overall, I believe I successfully grasped the intended learning outcomes of the lab, particularly in applying the math module and implementing decision-making effectively. Working with my partner was a nice experience, as we shared insights and strategies that enriched our understanding and made problem-solving more effective. Andrew was a great partner to work with.