Lab 5: Intro to Collision Response

Published | Edit | ⋮

GPR-350 Game Physics
Instructor: Daniel S. Buckstein
Lab 5: Intro to Collision Response

Summary:
This week we improve upon our collision detection algorithms by introducing basic collision response.

Submission:
Submit a link to your online repository with the completed assignment's branch name and commit ID/index. If you have not created an online repository to keep track of your work, you should do so as part of this assignment; it will be checked. ***Work in pairs***.

Instructions:

Step 1: Collision and contact structures/descriptors
Define a structure to assist with collisions. The structure should contain at least the following: references to the collision hulls involved, collision status (did it happen), contacts (location, normal, coefficient of restitution, collision depth), and any other pertinent information needed to resolve a collision.

Step 2: Collision response
When two collision hulls collide, a collision descriptor should be used to indicate this this happened. Generate the data therein and use it to resolve the overlap between two objects. Use knowledge from Millington c. 7 to resolve the collisions between different combinations of circles and boxes.

Step 3: Test
Implement a simple scene to test objects responding to collisions.

Bonus:
Implement a more complex scene with some interactivity (e.g. cannonball vs brick wall).

Points 8

Submitting a text entry box

Due	For	Available from	Until
-	Everyone	-	-

+ Rubric