

PROGRAM DOCUMENTATION

MAIN PROGRAM NAME: Coll_Detect_BVH - laughing_buddha_right.py

PURPOSE: Check for collision detection between two complex 3D object meshes by creating and traversing through the octrees

SOURCE LANGUAGE: This version of the program was written in “Python”

COMPILING: The program can be compiled and run using the Pycharm compiler

DESCRIPTION: The program consists of four function declarations and one class declaration :

- **def is_colliding():**
To check for overlap collision between the AABB created
- **def check_collision():**
To check for collision between the 3D objects
- **def get_AABB_List():**
To fetch the Axis Aligned Bounding Box of each leaf node
- **def get_leaf_node_list():**
To traverse through the octree and return a list of leaf nodes
- **Class Traversal():**
Brute-force algorithm for traversing

FILES: *Coll_Detect_BVH - laughing_buddha_right.h* - contains the main program

Stanford_Bunny.ply – contains the ply version of Stanford Bunny file

happyStandRight_240.ply - contains the ply (stand right) version of Happy Buddha file