An update of the final project

Since the submission of the description of final project, I have been thinking about the feasibility and whether the game will be fun enough, some contents and specifications of the game may have been changed. On the other hand, through knowledge learnt through the lectures, I now have a better idea on how to realize some of my thoughts.

The game consists of following components:

1. Characters. Including player character and hostile characters. The main components of the body of the characters includes:
    1. Cube as the main body part, limb, palm, feet.
    2. Cylinder as neck and fingers.
    3. Sphere as head.

    The figure will be similar to the figure we designed in previous assignment. The special texture, for instance, cloth and so on will be implemented by bump mapping. The final result should follow the idea of the characters in the following image, which is blue as the primary color, while yellow draws certain characters on the primary blue.

Furthermore, other challenges may be present here, which is the moving of the character and the wielding of a weapon. How to make the moving and wielding doesn't look strange? We have to design a proper function to calculate the angles the body parts have to rotate, that might be a challenge. On the other hand, this involves collision detection.

Player character and hostile characters should be of the same class, except the actions of player are decided by user input, where I can make use of the existing code of NVMC, while the actions of hostile should be decided by system, a random decision system might be easy to implement, it would be a real pain in the neck if I wish the system to design some ‘not so silly’ path for the hostile characters.

2. Walls/Buildings. They are nothing but giant cubes. No interactions between the characters and these cubes should be expected. Challenge here is collision detection. In here, to simplify the whole process, we have designed the main body part as a cube, if we only test whether the cube has collided with other objects, it would be mathematically easier for us to detect collision. This kind of design is surely easy to understand and implement, but some funny things might happen (part of the limbs transfers into the walls as if there are no walls), since even most serious video games don't handle such a problem, I won’t care about it in the project either.