## Design Document for the Beetle Game

### Team Name: Jiggly Wigglies

## Your names and roles:

1. **Facilitator: Conner Bondurant**
2. **Recorder: Tradd Schmidt**
3. **Spokesperson: Basant Phuyal**
4. **Quality Control Officer: Rusty Dotson**
5. **Process Analyst: Rusty Dotson**

**Note that if there are only 4 members in your team, then the Quality Control Officer should also serve as Process Analyst.**

## Basic program concept:

Place a short but precise description of what your program will do here.

Our program will allow up to 4 users to play the game Beetles.

## Function Specifications

These specifications include the prototype and a docstring that specifies pre- and post-conditions.

For example, the textbook contains a specification for a search function that looks like:

|  |
| --- |
| # prototype includes the name of the function as well as the input  def search( items, target ):  """ locate target in items and get index  pre: items is a list of numbers  post: returns non-negative x where items[i] == target, if target is in items;  returns -1 otherwise """ |

Put in the space below the specifications for each function of the program you derived using functional abstraction. You can add and delete function entries as necessary.

Function 1:

|  |
| --- |
| def player\_count()  “““  Will ask user how many people will be playing and returns this number.  Pre: Nothing  Post: An integer between 1 and 4  ””” |

Function 2:

|  |
| --- |
| def get\_body\_part()  “““  Will generate a random integer between 1 and 6.  Pre: None  Post: All lowercase string  ””” |

Function 3:

|  |
| --- |
| def add\_body\_part(player, body\_part)  “““  Will check a player’s list of body parts already obtained, and if the part that was input can be added to the dictionary, it is added.  Pre: player is a dictionary for whoever’s turn it is, and this dictionary contains all the keys already set necessary for all the body parts. body\_part is an all lowercase string which is the body part that is being added to a specific player’s bug.  Post: If the body part was able to be added, the dictionary key corresponding to that body part will be changed. Otherwise the dictionary is not altered.  ””” |

Function 4:

|  |
| --- |
| def check\_progress(player)  “““  Will print out the count of body parts that the current player has.  Pre: player is a dictionary for whoever’s turn it is, and this dictionary contains all the keys already set necessary for all the body parts.  Post: Prints out the current count of each body part for the current player  ””” |

## List of Function Implementers:

|  |  |
| --- | --- |
| Team Member Name | List of Functions to Implement |
| Basant Phuyal | Function 1 |
| Tradd Schmidt | Function 2 |
| Conner Bondurant | Function 3 |
| Rusty Dotson | Function 4 |
|  |  |