

Assignment 1

The program uses valid user inputs to simulate Garlic Game. For user-specified number of players and seed value, two die are rolled randomly. The lowest player with lowest roll in each round loses a life (each have 3 to start). When player rolls “Midnight”, players on left and right sparkle/resurrect and gain one life. Rounds continue until only one player is alive and wins.

Basic format-

- prompt for player # input and seed
- if both are valid continue; if not, give invalid
- make list of players based on input player #
- set player lives to 3
- roll dice twice for given seed and each player
- player lives with lowest roll: n-1
- while player lives \geq 1, continue rolling; else do not roll
- if midnight, (player pos (n)) n+1 and n-1 sparkle if their lives \geq 1
 - if lives = 0, resurrect
 - Also lives = lives +1
- If player lives for all except 1 is 0, stop rounds

Pseudocode-

```
roll {
    random int between 1-6
}
main {
    initialize int player # and seed value
    initialize first and second roll and full roll
    prompt user for player #
    scan input
    if player # <2 or >10
        print invalid
    else
        initialize game array
        initialize lives array
        prompt for seed value
        scan input
        if seed < 32bit and >0
            get player # players from names array
            store in game array
            for player #, set lives to 3 in lives array
```

```

for players n while players < player #, n+1
  If all player lives except 1 == 0
    call roll for first roll
    call roll for second roll
    full roll = first roll + second roll
    lowest roll = full roll
    if next full roll < full roll
      set lowest = next
      get index of player with lowest roll
    use to index roll matrix with roll names
    if lives > 0
      lives[lowest player roll] = lives - 1
    if first roll and second roll == midnight
      if lives[i-1] = 0
        print resurrects
      else
        print sparkles
      if lives[i+1] = 0
        print resurrects
      else
        print sparkles
      game player[i-1] = lives + 1
      game player[i+1] = lives + 1
  else
    print invalid
}

```