**Global**

INITIALIZE player counter

INITIALIZE turn counter

INITIALIZE dice roll array

INITIALIZE score

INITIALIZE score dice counted

INITIALIZE Player class

INITIALIZE name

INITIALIZE score

INITIALIZE winner boolean

INITIALIZE players array

DEFINE CONSTRUCTOR with name argument

SET name to argument name

DEFINE FUNCTION to return if player is on scoreboard

IF score is greater than or equal to 500

RETURN with true

Otherwise RETURN with false

DEFINE FUNCTION to get score

RETURN player score

DEFINE FUNCTION to add to score with argument for how many points to add

ADD points to argument score

DEFINE FUNCTION to set player name with argument defining said name

SET player name to argument name

DEFINE FUNCTION to get the players name

RETURN player name

**MAIN**

INITIALIZE input string

CALL function to initialize game state

START DO LOOP

IF the current player is a winner

PRINT current player can win the game!

INCREMENT current turn by 1

RESTART LOOP

CALL function to print turn information

CALL function to print input commands

PRINT what is your command?

READ input

CALL function to determine what to do with input

WAIT for key press after calculating input

WHILE input is not quitting

END DO LOOP

**END MAIN**

**Initialize Game State Function**

INITIALIZE random seed for dice rolls

START DO LOOP

PRINT how many people are playing the game?

READ number of players

IF number of players is lower than minimum

PRINT need more players

IF number of players input is not an integer

PRINT input is invalid

WHILE number of players is not set correctly

END DO LOOP

SET players array size to number of players

FOR every player

INITIALIZE temp input

PRINT what is the name of the player

READ input

SET player name for current player in loop

SET current turn to first player

CLEAR console

**END initialize game state function**

**Print Turn State Info Function**

CLEAR console

PRINT current players turn

PRINT score that can be banked

PRINT banked score

PRINT if on scoreboard or not

**END Print turn state info func**

**Print commands function**

PRINT Q to quit

PRINT R to roll dice

PRINT C to cash dice and end turn

PRINT S to view scoreboard

PRINT D to drop out of game

**END Print commands function**

**Print Scoreboard function**

INITIALIZE temp array for players

SORT temp array using Score Compare Function

FOR every player in game

IF Player is on scoreboard

PRINT score and position

ELSE

PRINT player name is not on scoreboard

**END print scoreboard function**

**Calculate Input Command Function**

IF input command is quit

RETURN

ELSE IF input command is roll

IF the dice that have been scored is all the dice (6)

FOR all the dice in the array

SET value to 0

END IF

SET the number of dice scored to 0

CALL Roll Dice function

PRINT Dice rolled outcome

CALL score dice function

ELSE IF input command is C

CALL Cash dice function

ELSE IF input command is S

CALL Print scoreboard function

ELSE IF input command is DROP OUT

CALL Drop out function

ELSE

PRINT command not recognized, try again

**END Calculate Input Function**

**Roll Dice Function**

FOR the number of dice being rolled, greater than-equal to 0, decrement by 1

SET the dice value to be a random number between 1 and 6

**END Roll Dice Function**

**Score Dice Function**

INITIALIZE points scored this turn

CALCULATE sort dice in ascending order

FOR the number of dice to score, greater than-equal to 0, decrement by 1

IF there are 3 of a kind

CALCULATE score as 3 of a kind

ELSE IF only one of a kind

CALCULATE score as 1 of a kind

END FOR

IF points scored this turn is 0

PRINT FARKLE

CALL Next Turn function

ELSE

ADD points scored this turn to the players current turn score

PRINT points earned

**END Score Dice Function**

**Next Turn Function**

INCREMENT current turn by 1

IF the current turn is over the number of players

SET current turn to 0

CALL Reset values function

**END Next turn function**

**Reset Values Function**

FOR all the dice

SET value to 0

SET score to 0

SET dice scored to 0

**END Reset values function**

**Cash Score Function**

IF current player has a banked score of 0 AND has less than 500 points

PRINT need to have 500 points in one turn to get on scoreboard

RETURN

END IF

PRINT banked score

ADD turn score to players score

PRINT new score

CALL Next Turn Function

**END Cash Score Function**

**Score Compare Function**

RETURN player 1’s score is greater than player 2’s score

**END Score Compare Function**