Risk

Continents: **6**

- Australia, South America, Africa, North America, Europe, and Asia (Same Rule)
- Territories: Assume evenly spread, 3 for each?? (4 territories)

Armies

- Lets assume only infantry (worth 1) since its virtual and have ample space (Adopt)
- Depending on # of players, each will get a specified number of infantry (2 players for now, with 20 armies each)

Cards

- Mostly likely a dictionary
- Territory + pic of (Infantry, Cavalry, or Artillery) (Cards with territory only)
- 2 wild cards (all 3 pictures but no territory) (Exclude)
- Secret mission? (Exclude)
- Objective mission:
  - Conquer the world

Set Up

- Roll die, the highest gets to place the 1st infantry on any territory (Probably Random placement for 1 army)
- How to continue here? By decreasing order of dice # or left to right, until all territories are occupied (Base on dice number)
- Continue placing armies on land territories until no more infantry (Personal choice to chose how many infantry placed on each territory)
- The highest dice player goes first

Game Play

- Getting and placing new armies
- Either Attacking or Fortifying your position

Receiving Infantry

- Territories: # of territories you occupy / 3, rounded down (Skip first turn, and start from the second)
- Continents: Equal armies given?? Or: (Same Rule)
  - Asia: 7
  - North America: 5
  - Europe: 5
  - Africa: 3
  - South America: 2
  - Australia: 2

Risk Cards

- Earning Cards:
  - After capturing a territory, you earn 1 risk card (If you win a territory, you will get a card from the deck)
  - Trying to get the following: (Trade 5 cards with 1 Infantry only)
    - 3 cards of same design
    - 1 each of 3 designs
    - Any 2 plus a wild card
  - Based on total number of sets anyone has traded in so far, he will subsequently take additional armies (Ignore)
    - After 6th set has been traded in, each additional set is worth 5 armies

- If any of the 3 cards you trade in shows the picture of a territory you occupy, you get 2 additional cards

Attacking (Same Rule)
- Only attack territories that are adjacent or connected via a dash line
- At least 2 armies in the territory you are attacking from
- You may shift to attacking another territory at any time during your turn (as often and as many as you want)

To Attack (One Dice for all)
- Decide on the # of dices to roll
- At least 1 more army in your territory than the number of dices you roll
- Defender will roll either 1 or 2 dice. To roll 2 dice, he must have at least 2 infantry in territory

To decide a battle (One battle, either win or lose – Conquer or Die)
- Compares highest dice each of you rolled
- Loser will lose one infantry

Fortifying (For each turn, you have the choice to pass or play your turn)
- Free move

Breakdown Structure

Setting Up the Game

- Identifying the continents and the territories within each continent
  - Asia
    - China, India, Cyberia
  - North America
    - Canada, United Stated, Mexico
  - South America
    - Brazil, Peru, Argentine
  - Europe
    - Western Europe, Eastern Europe, North Europe
  - Africa
    - North Africa, Western Africa, South Africa
  - Oceana
    - Australia, New Zealand, Indonesia
- E.g.: Dict={'Asia': ['China', 'India', 'Cyberia'], 'North America': ['Canada', 'United States', 'Mexico']… 'China': ['India', 'Cyberia', 'Australia'] …}

- Distributing Infantry to players – 2 Players only
  - E.g.: Player_1={'Infantry': 20, 'Cards': 0, 'Territory': [ ], {'Territory1':#, 'Territory2':#…}}

- Game continue = True (big if statement)

- Random Distribution of Territories to Players (either 2nd user or computer)
  - Randomly split 18 territories into 9 for each player

  Note: Random placement of territories to each player

  Note: Either include all territories in the sub-dictionary or use the add/update command to add accordingly

- Placing Infantry to Territories
  - Player1: Assigning # of infantry for each territory
  - If there is another user, then ask for assignment, if computer then randomly distribute (Random Function)

- Rolling Dice to know whose starting
  - Random Sample between 1 and 6
    - If Player1> Player2, Player 1 goes first
    - If Player 2> Player1, Player 2 goes first
    - In case you have a tie, run it again

- Receiving additional Infantry
  - Starts at beginning of 2nd turn
    - Def Add_Inf (# of round, Name of Player)

      If # of round < 2:

      Return 0

      Else

      If # of territories >= 3:

      3 + # of territory / 3 (round down))

      elif # of full continent > 0

      3 + # of territory / 3 + 3*(# of continent)

      else # of territories <3:

+3
if # of card exchange >5 :
input ("Enter # of cards to exchange") / 5 (Round down)
return Total Bonus Variable

Def Alloc_Bonus (Total Bonus Variable):
Input (Where do you want to allocate)
Iterate over dictionaries and update values accordingly

- Printing out the status of the game: Player / Territories / Infantry #
  - Function, called after each turn / round

- Ask do you want to attack ?
  - If yes:
    - attack ()
  - Else
    - return

- Attack function
  - Conquer or die mode,
  - Minimum of 2 army to attack

  - Def attack ()

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If input (territory which is attacking) > 1
    If input (territory which is attacked) is boundaries :

        While defense army >0 AND offence army >1:
            Random dice attack, random dice defense
            Print (Random dice attack, random dice defense)

            If random dice attack > random dice defense:
                Print (Attack win)
                Reduce defense army by 1
            Elif random dice defense >= random dice attack
                Defense wins
                Reduce offence army by 1

        If defense army = 0:
            Ask input (Max = x-1, minimum is 1) to choose how many infantries do
        you want to move
            Add the territory to the winners dictionary
            Remove the territory from defense dictionary

        Else offence army = 1
            Return

    Else input (territory which is attacked) not boundaries :
        Print (attacked country not boundaries)
        Return

Else input (territory which is attacking) =1:
```

Print (“you can’t attacked not enough armies)
Return

- Ask do you want to attack again ?
  - If yes:
    attack ()
  - Else
    return

- Printing out the status of the game: Player / Territories / Infantry #
  - Function, called after each turn / round

Winner()

- def winner ():
  if player 1/2 has all the world :
  Print(player 1/2 winner)
  Game continue = False
  Else :
  Return

Next player go ahead