**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 ()

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