Positive Test

- On the deploy box, enter 8 and click on button of Deploy. (input must be 8, because our voter will vote on 8 possible choices)

- Input the voter background into VoterBackground()function, the input are (uint : number of cars voter owned , uint: voter annual income, bool: does the voter believe in climate change, bool: does the voter ever received climate change education, bool: does the voter travel a lot, bool: does the voter is in military, uint: age of the voter) note: please do not enter age below of 18 and do not enter false for the input:" does the voter ever received climate change education" because these two are the modifier.
for input you can copy this-> 1,40000,true,true,true,false,19 and paste in VoterBackGround() function box, then click on the VoterBackground button

3) Now click on the button of VoteWeight() function, this function will do a calculation to product a final VoteWeight of this voter base on the input of VoterBackGround(). Note: there is possible that after calculation, the vote weight is going to be 0 or below. Then we don't count the vote from this voter as valid.

4) now click on button of getBackGround function, this will print out the input from VoterBackground

5) now click on button of getVoteWeight function, this will print out the final vote weight of this voter. If you copy the input I have provided previously, this function will print out 2

6) now go to the vote() function, input will be from range 1 to 8, which is our 8 possible vote result. Here we will enter 1 and then click on vote button
  //proposal 1   RCP 2.5 and fair
//proposal 2   RCP 2.5 and not fair

//proposal 3   RCP 4.5 and fair
//proposal 4   RCP 4.5 and not fair
//proposal 5   RCP 6 and fair
//proposal 6   RCP 6 and not fair
//proposal 7   RCP 8.5 and fair
   //proposal 8   RCP 8.5 and not fair

7) now go to the Account box and switch to another account address, this time the input for VoterBackGround will change to -> 1,300,true,true,true,false,19 copy this and paste to VoterBackGround function and then click the button. Now click on the button of VoteWeight. Next, click on the button of getBackGround and getVoteWeight. You will see them both updated, the voteWeight for this voter will be (4), Now this time we will vote for proposal 2, go to vote() function, enter 2 and click the vote button.

7) now click on button of MostVotedProposal, this function will print out the most voted proposal, which will be 2. because voteWeight for this voter will be (4), which is greater than previous voter (2).

8) Now go to the Account box, switch the address to the chairperson address, then go to the vetoRight function, this function is only open to chairperson(president), if the president does not agree the winning proposal, then she/he has right to veto the result. Your input type is bool and you would enter true (agree), and then click on the button of vetoRight.

   9)click on winningProposal, if everything does correctly, this will print out 2 (proposal 2).

10) now we click on the button of carbonTaxOnProduct, our winner proposal is proposal 2 (RCP 2.5 and it is not fair to let different income social class to pay the same co2 tax percentage on

products) so the percentage will distribute base on the income class. You will see this function print out

- 0: uint256: lowerIncomeClass____TaxPercentage

5

- 1: uint256: middleIncomeClass___TaxPercentage

15

- 2: uint256: midUpperIncomeClassTaxPercentage

35

- 3: uint256: UpperIncomeClass___TaxPercentage

45

Note: this vote do not require for register, therefore we are not going to use function delegate() and function giveRightToVote()

<u>Positive Test Completed.</u>

<u>Negative Test</u>

- for the input of voterBackGround() function, if your input for age is below 18 or input for recievedClimateChangeEducation is false, then you are not able vote, this is control by the modifier require_Knownlege_of_CC and modifier isEighteen

<u>Negative Test 1 Action Plan</u>

Deploy the contract using parameter 8. Go to VoterBackground() function, copy
1,300,true,true,true,false,17 (the voter age here is 17) then click the button.

Now click on button of voteWeight, next go to the vote() function, enter 2 and hit vote button. You will see the error message in the console.
   you can do this again by using the following input
1,300,true,false,true,false,19   (does not received any climate change education)   or 1,300,true,false,true,false,17 (does not received any climate change education and also the age is below 18)

- if the president(chairperson) does not agree(input is false in vectorRight() function) or does not respond to(enter nothing in vectorRight() function) the most Voted proposal. Then the winningProposal function() will rejected this transaction by the modifier presidentAppoval

Negative Test 2 Action Plan

first Deploy the contract using parameter 8, go to VoterBackGround function, copy 1,300,true,true,true,true,18 and paste in the box then click the button. next click on VoteWeight, next enter 1 for the vote() function. And then you either enter false or enter nothing in vetoRight() function and click the button . In the end you click the winningProposal button, you will see the error message in the console.

- You can not vote if you didn't fill out your background survery (if you ignore VoterBackGround() function and vote directly, which is not allow) this is control by the modifier requireBackGround.

Negative Test 3 Action Plan

first Deploy the contract using parameter 8, then go to vote() function, enter 1 and click the button. You will see the error message in the console.

Negative Test Completed