# Create – Applications From Ideas
# Written Response Submission Template

Please see Assessment Overview and Performance Task Directions for Student for the task directions and recommended word counts.

**Program Purpose and Development**

2a)

Blackjack is an online game of 21 I made in Python. The purpose of this program is to help users devlop critical thinking skills and practice concentration through an intense game. The program fulfills this purpose by dealing out a set of cards and promting the user to make a deciosn based on the balue of their hand, promting them to think ahead and then allowing them to review their past actions and keep score of the game. This video illustrates the above features y show one full game of 21 and how afte the user is given a hand they mist decide to hit or stand and at the end the game decides who wins based on the basic rules of 21. Addiotnally, the video shows how the progrm finnaly prints out who won the round and the total score while also allowing the user to review their deicsions.

2b)

An incremental process was when I developed the possible outcomes of the game as the player can either bust, get 21 or have less than the computer so I implemented one possible outcome at a time to ensure there were not overlapping issues when I finished. Addionally an incremental proceess is an if stement that issues a new card until until the user rechaes or exceed 21. An interative procxess was when I added a loop for the computers play by using comp.append(rc(cards)) to determine how the computer will gernrally play, thus eliminateing the need tonset a difficulty or reprogram the dealer every time. Both of these processes were completed independently. A diificulty faced was when I had to find out a way to make my randon number generator run over and over again until a winner was decided. I resolved this by using a  while True: statement to ensures trhat program would not stop running until one side won. Addiotnally, a difficulty was when I needed to make the program print out the total score and I resolved this issue by using %d. Both of these difficulties were resolved independently.