Category	Code	Description	Source
Games	2048	A replication of the popular puzzle game.	Power Up Tech Academy
Games	Battleship	A replication of the classic Battleship game.	Power Up Tech Academy
Games	Connect Four	A replication of the traditional game with an adjustable board size and an adjustable number of required connections to win.	Self-directed
Games	Flood -It!	A replication of the electronic game. There are randomly colored squares and the goal is to turn all squares the same color with the least number of moves.	Power Up Tech Academy/Self-directed
Games	Hangman	A replication of the classic game.	Self-directed
Games	Mindsweeper	A replication of the classic computer game.	Self-directed
Games	Stratego	A replication of the classic Stratego board game.	Self-directed
Games	Tic-Tac-Toe (AI)	This tic-tac-toe program can pit any combination of player, AI and random generator against each other.	Juni Learning
Games	Tic-Tac-Toe (Basic)	This tic-tac-toe program plays tic-tac-toe with any number of players and any board size (no limit).	Self-directed
Math	Base Converter	This compact code can convert a number in any base up into a number in any other base (currently up to base 72).	Self-directed

Math	Pythagorean Triples	This program will flood your computer's memory with unique, relatively prime Pythagorean triples, until you stop the program. I have generated 100,000,000 relatively prime Pythagorean triples in about 10 seconds!	Self-directed
Sorting Algorithms	Bubble Sort	This algorithm sorts a list by comparing two number which are next to each other. If the larger number is on the left, they swap. This process reiterates through the list over and over until the list is sorted.	Juni Learning
Sorting Algorithms	Insertion Sort	This sorting algorithm separates data into sorted and unsorted data. If pulls the first number in the unsorted data and slots it into the appropriate spot in the sorted data. This process continues until the list is sorted.	Juni Learning
Sorting Algorithms	Merge Sort	This sorting algorithm splits a list into roughly equal parts. The program then repeats splitting each part into equally separate parts until each part is equal to length one. Finally, the algorithm combines the parts in the correct order to create a sorted list.	Juni Learning
Sorting Algorithms	Quick Sort	This sorting algorithm chooses the first number in a list to be a partition. Then, it runs the same algorithm, separately, for all numbers smaller than the particion and all numbers larger than the partition. Finally, the program assembles off the data in the proper order.	Juni Learning

Sorting Algorithms	Selection Sort	This sorting algorithm finds the smallest number in a list and puts it to the front of the list. The program then finds the smallest number of the remaining numbers and moves it front, behind the previously moved number. This process continues until the list is sorted.	Juni Learning