http://www.linuxtrainingacademy.com				
Project Name	**Project Description**	**Category**	**Link to Project Description**	**Link to Project Solution**
100 doors		.	Click Here	Click Here
24 game			Click Here	Click Here
24 game/Solve			Click Here	Click Here
9 billion names of God the integer			Click Here	Click Here
99 Bottles of Beer			Click Here	Click Here
A+B			Click Here	Click Here
ABC Problem			Click Here	Click Here
Abstract type			Click Here	Click Here
Abundant, deficient and perfect number			Click Here	Click Here
Accumulator factory			Click Here	Click Here
Ackermann function			Click Here	Click Here
Active Directory/Connect			Click Here	Click Here
Active Directory/Search for a user			Click Here	Click Here
Active object			Click Here	Click Here
Add a variable to a class instance at runtime			Click Here	Click Here
Address of a variable			Click Here	Click Here
AKS test for primes			Click Here	Click Here
Align columns			Click Here	Click Here
Aliquot sequence classifications			Click Here	Click Here
Almost prime			Click Here	Click Here
Amb			Click Here	Click Here
Amicable pairs			Click Here	Click Here
Anagrams			Click Here	Click Here
Anagrams/Deranged anagrams			Click Here	Click Here
Animate a pendulum			Click Here	Click Here
Animation			Click Here	Click Here
Anonymous recursion			Click Here	Click Here
Append a record to the end of a text file			Click Here	Click Here
Apply a callback to an array			Click Here	Click Here
Arbitrary-precision integers (included)			Click Here	Click Here
Arena storage pool			Click Here	Click Here
Arithmetic evaluation			Click Here	Click Here
Arithmetic-geometric mean			Click Here	Click Here
Arithmetic-geometric mean/Calculate Pi			Click Here	Click Here
Arithmetic/Complex			Click Here	Click Here
Arithmetic/Integer			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Arithmetic/Rational			Click Here	Click Here
Array concatenation			Click Here	Click Here
Array length			Click Here	Click Here
Arrays			Click Here	Click Here
Assertions			Click Here	Click Here
Associative array/Creation			Click Here	Click Here
Associative array/Iteration			Click Here	Click Here
Atomic updates			Click Here	Click Here
Average loop length			Click Here	Click Here
Averages/Arithmetic mean			Click Here	Click Here
Averages/Mean angle			Click Here	Click Here
Averages/Mean time of day			Click Here	Click Here
Averages/Median			Click Here	Click Here
Averages/Mode			Click Here	Click Here
Averages/Pythagorean means			Click Here	Click Here
Averages/Root mean square			Click Here	Click Here
Averages/Simple moving average			Click Here	Click Here
AVL tree			Click Here	Click Here
Balanced brackets			Click Here	Click Here
Balanced ternary			Click Here	Click Here
Benford's law			Click Here	Click Here
Bernoulli numbers			Click Here	Click Here
Best shuffle			Click Here	Click Here
Binary digits			Click Here	Click Here
Binary search			Click Here	Click Here
Binary strings			Click Here	Click Here
Bitcoin/address validation			Click Here	Click Here
Bitcoin/public point to address			Click Here	Click Here
Bitmap			Click Here	Click Here
Bitmap/Bresenham's line algorithm			Click Here	Click Here
Bitmap/Flood fill			Click Here	Click Here
Bitmap/Histogram			Click Here	Click Here
Bitmap/Midpoint circle algorithm			Click Here	Click Here
Bitmap/PPM conversion through a pipe			Click Here	Click Here
Bitmap/Read a PPM file			Click Here	Click Here
Bitmap/Read an image through a pipe			Click Here	Click Here
Bitmap/Write a PPM file			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Bitwise IO			Click Here	Click Here
Bitwise operations			Click Here	Click Here
Boolean values			Click Here	Click Here
Box the compass			Click Here	Click Here
Brace expansion			Click Here	Click Here
Break OO privacy			Click Here	Click Here
Brownian tree			Click Here	Click Here
Bulls and cows			Click Here	Click Here
Bulls and cows/Player			Click Here	Click Here
Caesar cipher			Click Here	Click Here
Calendar			Click Here	Click Here
Calendar - for "REAL" programmers			Click Here	Click Here
Call a foreign-language function			Click Here	Click Here
Call a function			Click Here	Click Here
Call a function in a shared library			Click Here	Click Here
Call an object method			Click Here	Click Here
Canny edge detector			Click Here	Click Here
Carmichael 3 strong pseudoprimes			Click Here	Click Here
Case-sensitivity of identifiers			Click Here	Click Here
Casting out nines			Click Here	Click Here
Catalan numbers			Click Here	Click Here
Catalan numbers/Pascal's triangle			Click Here	Click Here
Catamorphism			Click Here	Click Here
Character codes			Click Here	Click Here
Chat server			Click Here	Click Here
Check Machin-like formulas			Click Here	Click Here
Check that file exists			Click Here	Click Here
Checkpoint synchronization			Click Here	Click Here
Chinese remainder theorem			Click Here	Click Here
Cholesky decomposition			Click Here	Click Here
Circles of given radius through two points			Click Here	Click Here
Classes			Click Here	Click Here
Closest-pair problem			Click Here	Click Here
Closures/Value capture			Click Here	Click Here
Collections			Click Here	Click Here
Color of a screen pixel			Click Here	Click Here
Color quantization			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Colour bars/Display			Click Here	Click Here
Colour pinstripe/Display			Click Here	Click Here
Colour pinstripe/Printer			Click Here	Click Here
Combinations			Click Here	Click Here
Combinations and permutations			Click Here	Click Here
Combinations with repetitions			Click Here	Click Here
Comma quibbling			Click Here	Click Here
Command-line arguments			Click Here	Click Here
Comments			Click Here	Click Here
Compare a list of strings			Click Here	Click Here
Compare sorting algorithms' performance			Click Here	Click Here
Compile-time calculation			Click Here	Click Here
Compound data type			Click Here	Click Here
Concurrent computing			Click Here	Click Here
Conditional structures			Click Here	Click Here
Conjugate transpose			Click Here	Click Here
Constrained genericity			Click Here	Click Here
Constrained random points on a circle			Click Here	Click Here
Continued fraction			Click Here	Click Here
Continued fraction/Arithmetic/Construct from rational number			Click Here	Click Here
Convert decimal number to rational			Click Here	Click Here
Convert seconds to compound duration			Click Here	Click Here
Conway's Game of Life			Click Here	Click Here
Copy a string			Click Here	Click Here
Count in factors			Click Here	Click Here
Count in octal			Click Here	Click Here
Count occurrences of a substring			Click Here	Click Here
Count the coins			Click Here	Click Here
Cramer's rule			Click Here	Click Here
CRC-32			Click Here	Click Here
Create a file			Click Here	Click Here
Create a file on magnetic tape			Click Here	Click Here
Create a two-dimensional array at runtime			Click Here	Click Here
Create an HTML table			Click Here	Click Here
Create an object at a given address			Click Here	Click Here
CSV data manipulation			Click Here	Click Here
CSV to HTML translation			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Currying			Click Here	Click Here
Cut a rectangle			Click Here	Click Here
Date format			Click Here	Click Here
Date manipulation			Click Here	Click Here
Day of the week			Click Here	Click Here
Deal cards for FreeCell			Click Here	Click Here
Death Star			Click Here	Click Here
Deconvolution/1D			Click Here	Click Here
Deconvolution/2D+			Click Here	Click Here
Deepcopy			Click Here	Click Here
Define a primitive data type			Click Here	Click Here
Delegates			Click Here	Click Here
Delete a file			Click Here	Click Here
Detect division by zero			Click Here	Click Here
Determine if a string is numeric			Click Here	Click Here
Determine if only one instance is running			Click Here	Click Here
Digital root			Click Here	Click Here
Digital root/Multiplicative digital root			Click Here	Click Here
Dinesman's multiple-dwelling problem			Click Here	Click Here
Dining philosophers			Click Here	Click Here
Discordian date			Click Here	Click Here
Distributed programming			Click Here	Click Here
DNS query			Click Here	Click Here
Documentation			Click Here	Click Here
Dot product			Click Here	Click Here
Doubly-linked list/Definition			Click Here	Click Here
Doubly-linked list/Element definition			Click Here	Click Here
Doubly-linked list/Element insertion			Click Here	Click Here
Doubly-linked list/Traversal			Click Here	Click Here
Dragon curve			Click Here	Click Here
Draw a clock			Click Here	Click Here
Draw a cuboid			Click Here	Click Here
Draw a sphere			Click Here	Click Here
Dutch national flag problem			Click Here	Click Here
Dynamic variable names			Click Here	Click Here
Echo server			Click Here	Click Here
Element-wise operations			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Empty directory			Click Here	Click Here
Empty program			Click Here	Click Here
Empty string			Click Here	Click Here
Enforced immutability			Click Here	Click Here
Entropy			Click Here	Click Here
Enumerations			Click Here	Click Here
Environment variables			Click Here	Click Here
Equilibrium index			Click Here	Click Here
Ethiopian multiplication			Click Here	Click Here
Euler method			Click Here	Click Here
Euler's sum of powers conjecture			Click Here	Click Here
Evaluate binomial coefficients			Click Here	Click Here
Even or odd			Click Here	Click Here
Events			Click Here	Click Here
Evolutionary algorithm			Click Here	Click Here
Exceptions			Click Here	Click Here
Exceptions/Catch an exception thrown in a nested call			Click Here	Click Here
Executable library			Click Here	Click Here
Execute a Markov algorithm			Click Here	Click Here
Execute a system command			Click Here	Click Here
Execute Brain****			Click Here	Click Here
Execute HQ9+			Click Here	Click Here
Execute SNUSP			Click Here	Click Here
Exponentiation operator			Click Here	Click Here
Extend your language			Click Here	Click Here
Extensible prime generator			Click Here	Click Here
Extreme floating point values			Click Here	Click Here
Factorial			Click Here	Click Here
Factors of a Mersenne number			Click Here	Click Here
Factors of an integer			Click Here	Click Here
Fast Fourier transform			Click Here	Click Here
Fibonacci n-step number sequences			Click Here	Click Here
Fibonacci sequence			Click Here	Click Here
Fibonacci word			Click Here	Click Here
Fibonacci word/fractal			Click Here	Click Here
File input/output			Click Here	Click Here
File modification time			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
File size			Click Here	Click Here
Filter			Click Here	Click Here
Find common directory path			Click Here	Click Here
Find largest left truncatable prime in a given base			Click Here	Click Here
Find limit of recursion			Click Here	Click Here
Find the last Sunday of each month			Click Here	Click Here
Find the missing permutation			Click Here	Click Here
First class environments			Click Here	Click Here
First-class functions			Click Here	Click Here
First-class functions/Use numbers analogously			Click Here	Click Here
Five weekends			Click Here	Click Here
FizzBuzz			Click Here	Click Here
Flatten a list			Click Here	Click Here
Flipping bits game			Click Here	Click Here
Flow-control structures			Click Here	Click Here
Floyd's triangle			Click Here	Click Here
Forest fire			Click Here	Click Here
Fork			Click Here	Click Here
Formal power series			Click Here	Click Here
Formatted numeric output			Click Here	Click Here
Forward difference			Click Here	Click Here
Four bit adder			Click Here	Click Here
Fractal tree			Click Here	Click Here
Fractran			Click Here	Click Here
FTP			Click Here	Click Here
Function composition			Click Here	Click Here
Function definition			Click Here	Click Here
Function frequency			Click Here	Click Here
Function prototype			Click Here	Click Here
Galton box animation			Click Here	Click Here
Gamma function			Click Here	Click Here
Gaussian elimination			Click Here	Click Here
General FizzBuzz			Click Here	Click Here
Generate Chess960 starting position			Click Here	Click Here
Generate lower case ASCII alphabet			Click Here	Click Here
Generator/Exponential			Click Here	Click Here
Generic swap			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Globally replace text in several files			Click Here	Click Here
Go Fish			Click Here	Click Here
Gray code			Click Here	Click Here
Grayscale image			Click Here	Click Here
Greatest common divisor			Click Here	Click Here
Greatest element of a list			Click Here	Click Here
Greatest subsequential sum			Click Here	Click Here
Greyscale bars/Display			Click Here	Click Here
Guess the number			Click Here	Click Here
Guess the number/With feedback			Click Here	Click Here
Guess the number/With feedback (player)			Click Here	Click Here
GUI component interaction			Click Here	Click Here
GUI enabling/disabling of controls			Click Here	Click Here
GUI/Maximum window dimensions			Click Here	Click Here
Hailstone sequence			Click Here	Click Here
Hamming numbers			Click Here	Click Here
Handle a signal			Click Here	Click Here
Happy numbers			Click Here	Click Here
Harshad or Niven series			Click Here	Click Here
Hash from two arrays			Click Here	Click Here
Hash join			Click Here	Click Here
Haversine formula			Click Here	Click Here
Hello world/Graphical			Click Here	Click Here
Hello world/Line printer			Click Here	Click Here
Hello world/Newbie			Click Here	Click Here
Hello world/Newline omission			Click Here	Click Here
Hello world/Standard error			Click Here	Click Here
Hello world/Text			Click Here	Click Here
Hello world/Web server			Click Here	Click Here
Here document			Click Here	Click Here
Heronian triangles			Click Here	Click Here
Hickerson series of almost integers			Click Here	Click Here
Higher-order functions			Click Here	Click Here
History variables			Click Here	Click Here
Hofstadter Figure-Figure sequences			Click Here	Click Here
Hofstadter Q sequence			Click Here	Click Here
Hofstadter-Conway $10,000 sequence			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Holidays related to Easter			Click Here	Click Here
Honeycombs			Click Here	Click Here
Horizontal sundial calculations			Click Here	Click Here
Horner's rule for polynomial evaluation			Click Here	Click Here
Host introspection			Click Here	Click Here
Hostname			Click Here	Click Here
Hough transform			Click Here	Click Here
HTTP			Click Here	Click Here
HTTPS			Click Here	Click Here
HTTPS/Authenticated			Click Here	Click Here
HTTPS/Client-authenticated			Click Here	Click Here
Huffman coding			Click Here	Click Here
I before E except after C			Click Here	Click Here
IBAN			Click Here	Click Here
Identity matrix			Click Here	Click Here
Image convolution			Click Here	Click Here
Image noise			Click Here	Click Here
Include a file			Click Here	Click Here
Increment a numerical string			Click Here	Click Here
Infinity			Click Here	Click Here
Inheritance/Multiple			Click Here	Click Here
Inheritance/Single			Click Here	Click Here
Input loop			Click Here	Click Here
Integer comparison			Click Here	Click Here
Integer overflow			Click Here	Click Here
Integer sequence			Click Here	Click Here
Interactive programming			Click Here	Click Here
Introspection			Click Here	Click Here
Inverted index			Click Here	Click Here
Inverted syntax			Click Here	Click Here
Iterated digits squaring			Click Here	Click Here
Jaro distance			Click Here	Click Here
Jensen's Device			Click Here	Click Here
JortSort			Click Here	Click Here
Josephus problem			Click Here	Click Here
Joystick position			Click Here	Click Here
JSON			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Jump anywhere			Click Here	Click Here
K-d tree			Click Here	Click Here
K-means++ clustering			Click Here	Click Here
Kaprekar numbers			Click Here	Click Here
Keyboard input/Flush the keyboard buffer			Click Here	Click Here
Keyboard input/Keypress check			Click Here	Click Here
Keyboard input/Obtain a Y or N response			Click Here	Click Here
Keyboard macros			Click Here	Click Here
Knapsack problem/0-1			Click Here	Click Here
Knapsack problem/Bounded			Click Here	Click Here
Knapsack problem/Continuous			Click Here	Click Here
Knapsack problem/Unbounded			Click Here	Click Here
Knight's tour			Click Here	Click Here
Knuth shuffle			Click Here	Click Here
Knuth's algorithm S			Click Here	Click Here
Langton's ant			Click Here	Click Here
Largest int from concatenated ints			Click Here	Click Here
Last Friday of each month			Click Here	Click Here
Last letter-first letter			Click Here	Click Here
Leap year			Click Here	Click Here
Least common multiple			Click Here	Click Here
Left factorials			Click Here	Click Here
Letter frequency			Click Here	Click Here
Levenshtein distance			Click Here	Click Here
Linear congruential generator			Click Here	Click Here
List comprehensions			Click Here	Click Here
Literals/Floating point			Click Here	Click Here
Literals/Integer			Click Here	Click Here
Literals/String			Click Here	Click Here
Logical operations			Click Here	Click Here
Long multiplication			Click Here	Click Here
Longest common subsequence			Click Here	Click Here
Longest increasing subsequence			Click Here	Click Here
Longest string challenge			Click Here	Click Here
Look-and-say sequence			Click Here	Click Here
Loop over multiple arrays simultaneously			Click Here	Click Here
Loops/Break			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Loops/Continue			Click Here	Click Here
Loops/Do-while			Click Here	Click Here
Loops/Downward for			Click Here	Click Here
Loops/For			Click Here	Click Here
Loops/For with a specified step			Click Here	Click Here
Loops/Foreach			Click Here	Click Here
Loops/Infinite			Click Here	Click Here
Loops/N plus one half			Click Here	Click Here
Loops/Nested			Click Here	Click Here
Loops/While			Click Here	Click Here
LU decomposition			Click Here	Click Here
Lucas-Lehmer test			Click Here	Click Here
Ludic numbers			Click Here	Click Here
Luhn test of credit card numbers			Click Here	Click Here
Lychrel numbers			Click Here	Click Here
LZW compression			Click Here	Click Here
Machine code			Click Here	Click Here
Mad Libs			Click Here	Click Here
Magic squares of odd order			Click Here	Click Here
Main step of GOST 28147-89			Click Here	Click Here
Make directory path			Click Here	Click Here
Man or boy test			Click Here	Click Here
Mandelbrot set			Click Here	Click Here
Map range			Click Here	Click Here
Matrix arithmetic			Click Here	Click Here
Matrix multiplication			Click Here	Click Here
Matrix transposition			Click Here	Click Here
Matrix-exponentiation operator			Click Here	Click Here
Maximum triangle path sum			Click Here	Click Here
Maze generation			Click Here	Click Here
Maze solving			Click Here	Click Here
MD4			Click Here	Click Here
MD5			Click Here	Click Here
MD5/Implementation			Click Here	Click Here
Median filter			Click Here	Click Here
Memory allocation			Click Here	Click Here
Memory layout of a data structure			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Menu			Click Here	Click Here
Metaprogramming			Click Here	Click Here
Metered concurrency			Click Here	Click Here
Metronome			Click Here	Click Here
Middle three digits			Click Here	Click Here
Minesweeper game			Click Here	Click Here
Modular exponentiation			Click Here	Click Here
Modular inverse			Click Here	Click Here
Monte Carlo methods			Click Here	Click Here
Monty Hall problem			Click Here	Click Here
Morse code			Click Here	Click Here
Mouse position			Click Here	Click Here
Move-to-front algorithm			Click Here	Click Here
Multifactorial			Click Here	Click Here
Multiple distinct objects			Click Here	Click Here
Multiple regression			Click Here	Click Here
Multiplication tables			Click Here	Click Here
Multiplicative order			Click Here	Click Here
Multisplit			Click Here	Click Here
Munching squares			Click Here	Click Here
Mutual recursion			Click Here	Click Here
N'th			Click Here	Click Here
N-queens problem			Click Here	Click Here
Named parameters			Click Here	Click Here
Naming conventions			Click Here	Click Here
Narcissist			Click Here	Click Here
Narcissistic decimal number			Click Here	Click Here
Natural sorting			Click Here	Click Here
Nautical bell			Click Here	Click Here
Non-continuous subsequences			Click Here	Click Here
Non-decimal radices/Convert			Click Here	Click Here
Non-decimal radices/Input			Click Here	Click Here
Non-decimal radices/Output			Click Here	Click Here
Nonoblock			Click Here	Click Here
Nth root			Click Here	Click Here
Null object			Click Here	Click Here
Number names			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Number reversal game			Click Here	Click Here
Numeric error propagation			Click Here	Click Here
Numerical integration			Click Here	Click Here
Numerical integration/Gauss-Legendre Quadrature			Click Here	Click Here
Object serialization			Click Here	Click Here
Odd word problem			Click Here	Click Here
Old lady swallowed a fly			Click Here	Click Here
OLE Automation			Click Here	Click Here
One of n lines in a file			Click Here	Click Here
One-dimensional cellular automata			Click Here	Click Here
OpenGL			Click Here	Click Here
Operator precedence			Click Here	Click Here
Optional parameters			Click Here	Click Here
Order disjoint list items			Click Here	Click Here
Order two numerical lists			Click Here	Click Here
Ordered Partitions			Click Here	Click Here
Ordered words			Click Here	Click Here
Palindrome detection			Click Here	Click Here
Pangram checker			Click Here	Click Here
Paraffins			Click Here	Click Here
Parallel calculations			Click Here	Click Here
Parametric polymorphism			Click Here	Click Here
Parametrized SQL statement			Click Here	Click Here
Parse an IP Address			Click Here	Click Here
Parsing/RPN calculator algorithm			Click Here	Click Here
Parsing/RPN to infix conversion			Click Here	Click Here
Parsing/Shunting-yard algorithm			Click Here	Click Here
Partial function application			Click Here	Click Here
Pascal matrix generation			Click Here	Click Here
Pascal's triangle			Click Here	Click Here
Pascal's triangle/Puzzle			Click Here	Click Here
Pattern matching			Click Here	Click Here
Penney's game			Click Here	Click Here
Percentage difference between images			Click Here	Click Here
Percolation/Bond percolation			Click Here	Click Here
Percolation/Mean cluster density			Click Here	Click Here
Percolation/Mean run density			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Percolation/Site percolation			Click Here	Click Here
Perfect numbers			Click Here	Click Here
Permutation test			Click Here	Click Here
Permutations			Click Here	Click Here
Permutations by swapping			Click Here	Click Here
Permutations/Derangements			Click Here	Click Here
Permutations/Rank of a permutation			Click Here	Click Here
Pernicious numbers			Click Here	Click Here
Phrase reversals			Click Here	Click Here
Pi			Click Here	Click Here
Pick random element			Click Here	Click Here
Pig the dice game			Click Here	Click Here
Pig the dice game/Player			Click Here	Click Here
Pinstripe/Display			Click Here	Click Here
Pinstripe/Printer			Click Here	Click Here
Play recorded sounds			Click Here	Click Here
Playing cards			Click Here	Click Here
Plot coordinate pairs			Click Here	Click Here
Pointers and references			Click Here	Click Here
Polymorphic copy			Click Here	Click Here
Polymorphism			Click Here	Click Here
Polynomial long division			Click Here	Click Here
Polynomial regression			Click Here	Click Here
Power set			Click Here	Click Here
Pragmatic directives			Click Here	Click Here
Price fraction			Click Here	Click Here
Primality by trial division			Click Here	Click Here
Prime decomposition			Click Here	Click Here
Primes - allocate descendants to their ancestors			Click Here	Click Here
Primorial numbers			Click Here	Click Here
Priority queue			Click Here	Click Here
Probabilistic choice			Click Here	Click Here
Problem of Apollonius			Click Here	Click Here
Program name			Click Here	Click Here
Program termination			Click Here	Click Here
Pythagorean triples			Click Here	Click Here
QR decomposition			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Quaternion type			Click Here	Click Here
Queue/Definition			Click Here	Click Here
Queue/Usage			Click Here	Click Here
Quickselect algorithm			Click Here	Click Here
Quine			Click Here	Click Here
Random number generator (device)			Click Here	Click Here
Random number generator (included)			Click Here	Click Here
Random numbers			Click Here	Click Here
Range expansion			Click Here	Click Here
Range extraction			Click Here	Click Here
Ranking methods			Click Here	Click Here
Rate counter			Click Here	Click Here
Ray-casting algorithm			Click Here	Click Here
RCRPG			Click Here	Click Here
Read a configuration file			Click Here	Click Here
Read a file line by line			Click Here	Click Here
Read a specific line from a file			Click Here	Click Here
Read entire file			Click Here	Click Here
Real constants and functions			Click Here	Click Here
Record sound			Click Here	Click Here
Reduced row echelon form			Click Here	Click Here
Regular expressions			Click Here	Click Here
Remove duplicate elements			Click Here	Click Here
Remove lines from a file			Click Here	Click Here
Rename a file			Click Here	Click Here
Rendezvous			Click Here	Click Here
Rep-string			Click Here	Click Here
Repeat a string			Click Here	Click Here
Resistor mesh			Click Here	Click Here
Respond to an unknown method call			Click Here	Click Here
Return multiple values			Click Here	Click Here
Reverse a string			Click Here	Click Here
Reverse words in a string			Click Here	Click Here
RIPEMD-160			Click Here	Click Here
Rock-paper-scissors			Click Here	Click Here
Roman numerals/Decode			Click Here	Click Here
Roman numerals/Encode			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Roots of a function			Click Here	Click Here
Roots of a quadratic function			Click Here	Click Here
Roots of unity			Click Here	Click Here
Rosetta Code/Count examples			Click Here	Click Here
Rosetta Code/Find bare lang tags			Click Here	Click Here
Rosetta Code/Find unimplemented tasks			Click Here	Click Here
Rosetta Code/Fix code tags			Click Here	Click Here
Rosetta Code/Rank languages by popularity			Click Here	Click Here
Rot-13			Click Here	Click Here
RSA code			Click Here	Click Here
Run-length encoding			Click Here	Click Here
Runge-Kutta method			Click Here	Click Here
Runtime evaluation			Click Here	Click Here
Runtime evaluation/In an environment			Click Here	Click Here
S-Expressions			Click Here	Click Here
Safe addition			Click Here	Click Here
Sailors, coconuts and a monkey problem			Click Here	Click Here
Same Fringe			Click Here	Click Here
Scope modifiers			Click Here	Click Here
Scope/Function names and labels			Click Here	Click Here
Search a list			Click Here	Click Here
Secure temporary file			Click Here	Click Here
SEDOLs			Click Here	Click Here
Self-describing numbers			Click Here	Click Here
Self-referential sequence			Click Here	Click Here
Semiprime			Click Here	Click Here
Semordnilap			Click Here	Click Here
Send an unknown method call			Click Here	Click Here
Send email			Click Here	Click Here
Sequence of non-squares			Click Here	Click Here
Sequence of primes by Trial Division			Click Here	Click Here
Set			Click Here	Click Here
Set consolidation			Click Here	Click Here
Set of real numbers			Click Here	Click Here
Set puzzle			Click Here	Click Here
Seven-sided dice from five-sided dice			Click Here	Click Here
SHA-1			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
SHA-256			Click Here	Click Here
Shell one-liner			Click Here	Click Here
Short-circuit evaluation			Click Here	Click Here
Show the epoch			Click Here	Click Here
Sierpinski carpet			Click Here	Click Here
Sierpinski triangle			Click Here	Click Here
Sierpinski triangle/Graphical			Click Here	Click Here
Sieve of Eratosthenes			Click Here	Click Here
Simple database			Click Here	Click Here
Simple windowed application			Click Here	Click Here
Simulate input/Keyboard			Click Here	Click Here
Simulate input/Mouse			Click Here	Click Here
Singleton			Click Here	Click Here
Singly-linked list/Element definition			Click Here	Click Here
Singly-linked list/Element insertion			Click Here	Click Here
Singly-linked list/Traversal			Click Here	Click Here
Sleep			Click Here	Click Here
SOAP			Click Here	Click Here
Sockets			Click Here	Click Here
Sokoban			Click Here	Click Here
Solve a Hidato puzzle			Click Here	Click Here
Solve a Holy Knight's tour			Click Here	Click Here
Solve a Hopido puzzle			Click Here	Click Here
Solve a Numbrix puzzle			Click Here	Click Here
Solve the no connection puzzle			Click Here	Click Here
Sort an array of composite structures			Click Here	Click Here
Sort an integer array			Click Here	Click Here
Sort disjoint sublist			Click Here	Click Here
Sort stability			Click Here	Click Here
Sort using a custom comparator			Click Here	Click Here
Sorting algorithms/Bead sort			Click Here	Click Here
Sorting algorithms/Bogosort			Click Here	Click Here
Sorting algorithms/Bubble sort			Click Here	Click Here
Sorting algorithms/Cocktail sort			Click Here	Click Here
Sorting algorithms/Comb sort			Click Here	Click Here
Sorting algorithms/Counting sort			Click Here	Click Here
Sorting algorithms/Gnome sort			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Sorting algorithms/Heapsort			Click Here	Click Here
Sorting algorithms/Insertion sort			Click Here	Click Here
Sorting algorithms/Merge sort			Click Here	Click Here
Sorting algorithms/Pancake sort			Click Here	Click Here
Sorting algorithms/Permutation sort			Click Here	Click Here
Sorting algorithms/Quicksort			Click Here	Click Here
Sorting algorithms/Radix sort			Click Here	Click Here
Sorting algorithms/Selection sort			Click Here	Click Here
Sorting algorithms/Shell sort			Click Here	Click Here
Sorting algorithms/Sleep sort			Click Here	Click Here
Sorting algorithms/Stooge sort			Click Here	Click Here
Sorting algorithms/Strand sort			Click Here	Click Here
Soundex			Click Here	Click Here
Sparkline in unicode			Click Here	Click Here
Special characters			Click Here	Click Here
Special variables			Click Here	Click Here
Speech synthesis			Click Here	Click Here
Spiral matrix			Click Here	Click Here
SQL-based authentication			Click Here	Click Here
Stable marriage problem			Click Here	Click Here
Stack			Click Here	Click Here
Stack traces			Click Here	Click Here
Stair-climbing puzzle			Click Here	Click Here
Standard deviation			Click Here	Click Here
Start from a main routine			Click Here	Click Here
State name puzzle			Click Here	Click Here
Statistics/Basic			Click Here	Click Here
Statistics/Normal distribution			Click Here	Click Here
Stem-and-leaf plot			Click Here	Click Here
Stern-Brocot sequence			Click Here	Click Here
String append			Click Here	Click Here
String case			Click Here	Click Here
String comparison			Click Here	Click Here
String concatenation			Click Here	Click Here
String interpolation (included)			Click Here	Click Here
String length			Click Here	Click Here
String matching			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
String prepend			Click Here	Click Here
Strip a set of characters from a string			Click Here	Click Here
Strip block comments			Click Here	Click Here
Strip comments from a string			Click Here	Click Here
Strip control codes and extended characters from a string			Click Here	Click Here
Strip whitespace from a string/Top and tail			Click Here	Click Here
Subleq			Click Here	Click Here
Substring			Click Here	Click Here
Substring/Top and tail			Click Here	Click Here
Subtractive generator			Click Here	Click Here
Sudoku			Click Here	Click Here
Sum and product of an array			Click Here	Click Here
Sum digits of an integer			Click Here	Click Here
Sum multiples of 3 and 5			Click Here	Click Here
Sum of a series			Click Here	Click Here
Sum of squares			Click Here	Click Here
Sutherland-Hodgman polygon clipping			Click Here	Click Here
Symmetric difference			Click Here	Click Here
Synchronous concurrency			Click Here	Click Here
System time			Click Here	Click Here
Table creation/Postal addresses			Click Here	Click Here
Take notes on the command line			Click Here	Click Here
Temperature conversion			Click Here	Click Here
Terminal control/Clear the screen			Click Here	Click Here
Terminal control/Coloured text			Click Here	Click Here
Terminal control/Cursor movement			Click Here	Click Here
Terminal control/Cursor positioning			Click Here	Click Here
Terminal control/Dimensions			Click Here	Click Here
Terminal control/Display an extended character			Click Here	Click Here
Terminal control/Hiding the cursor			Click Here	Click Here
Terminal control/Inverse video			Click Here	Click Here
Terminal control/Positional read			Click Here	Click Here
Terminal control/Preserve screen			Click Here	Click Here
Terminal control/Ringing the terminal bell			Click Here	Click Here
Terminal control/Unicode output			Click Here	Click Here
Ternary logic			Click Here	Click Here
Test a function			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Text processing/1			Click Here	Click Here
Text processing/2			Click Here	Click Here
Text processing/Max licenses in use			Click Here	Click Here
Textonyms			Click Here	Click Here
The ISAAC Cipher			Click Here	Click Here
The Twelve Days of Christmas			Click Here	Click Here
Thiele's interpolation formula			Click Here	Click Here
Thue-Morse			Click Here	Click Here
Tic-tac-toe			Click Here	Click Here
Time a function			Click Here	Click Here
Tokenize a string			Click Here	Click Here
Top rank per group			Click Here	Click Here
Topic variable			Click Here	Click Here
Topological sort			Click Here	Click Here
Topswops			Click Here	Click Here
Total circles area			Click Here	Click Here
Towers of Hanoi			Click Here	Click Here
Tree traversal			Click Here	Click Here
Trigonometric functions			Click Here	Click Here
Truncatable primes			Click Here	Click Here
Truncate a file			Click Here	Click Here
Twelve statements			Click Here	Click Here
Ulam spiral (for primes)			Click Here	Click Here
Unbias a random generator			Click Here	Click Here
Undefined values			Click Here	Click Here
Unicode strings			Click Here	Click Here
Unicode variable names			Click Here	Click Here
Universal Turing machine			Click Here	Click Here
Unix/ls			Click Here	Click Here
Update a configuration file			Click Here	Click Here
URL decoding			Click Here	Click Here
URL encoding			Click Here	Click Here
URL parser			Click Here	Click Here
Use another language to call a function			Click Here	Click Here
User input/Graphical			Click Here	Click Here
User input/Text			Click Here	Click Here
Vampire number			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Van der Corput sequence			Click Here	Click Here
Variable size/Get			Click Here	Click Here
Variable size/Set			Click Here	Click Here
Variable-length quantity			Click Here	Click Here
Variables			Click Here	Click Here
Variadic function			Click Here	Click Here
Vector products			Click Here	Click Here
Verify distribution uniformity/Chi-squared test			Click Here	Click Here
Verify distribution uniformity/Naive			Click Here	Click Here
Video display modes			Click Here	Click Here
Visualize a tree			Click Here	Click Here
Vogel's approximation method			Click Here	Click Here
Voronoi diagram			Click Here	Click Here
Walk a directory/Non-recursively			Click Here	Click Here
Walk a directory/Recursively			Click Here	Click Here
Web scraping			Click Here	Click Here
Window creation			Click Here	Click Here
Window creation/X11			Click Here	Click Here
Window management			Click Here	Click Here
Wireworld			Click Here	Click Here
Word wrap			Click Here	Click Here
World Cup group stage			Click Here	Click Here
Write entire file			Click Here	Click Here
Write float arrays to a text file			Click Here	Click Here
Write language name in 3D ASCII			Click Here	Click Here
Write to Windows event log			Click Here	Click Here
Xiaolin Wu's line algorithm			Click Here	Click Here
XML/DOM serialization			Click Here	Click Here
XML/Input			Click Here	Click Here
XML/Output			Click Here	Click Here
XML/XPath			Click Here	Click Here
Y combinator			Click Here	Click Here
Yahoo! search interface			Click Here	Click Here
Yin and yang			Click Here	Click Here
Zebra puzzle			Click Here	Click Here
Zeckendorf arithmetic			Click Here	Click Here
Zeckendorf number representation			Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Zero to the zero power			Click Here	Click Here
Zhang-Suen thinning algorithm			Click Here	Click Here
Zig-zag matrix			Click Here	Click Here
Multiples of 3 and 5			Click Here	
Even Fibonacci numbers			Click Here	
Largest prime factor			Click Here	
Largest palindrome product			Click Here	
Smallest multiple			Click Here	
Sum square difference			Click Here	
10001st prime			Click Here	
Largest product in a series			Click Here	
Special Pythagorean triplet			Click Here	
Summation of primes			Click Here	
Largest product in a grid			Click Here	
Highly divisible triangular number			Click Here	
Large sum			Click Here	
Longest Collatz sequence			Click Here	
Lattice paths			Click Here	
Power digit sum			Click Here	
Number letter counts			Click Here	
Maximum path sum I			Click Here	
Counting Sundays			Click Here	
Factorial digit sum			Click Here	
Amicable numbers			Click Here	
Names scores			Click Here	
Non-abundant sums			Click Here	
Lexicographic permutations			Click Here	
1000-digit Fibonacci number			Click Here	
Reciprocal cycles			Click Here	
Quadratic primes			Click Here	
Number spiral diagonals			Click Here	
Distinct powers			Click Here	
Digit fifth powers			Click Here	
Coin sums			Click Here	
Pandigital products			Click Here	
Digit cancelling fractions			Click Here	
Digit factorials			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Circular primes			Click Here	
Double-base palindromes			Click Here	
Truncatable primes			Click Here	
Pandigital multiples			Click Here	
Integer right triangles			Click Here	
Champernowne's constant			Click Here	
Pandigital prime			Click Here	
Coded triangle numbers			Click Here	
Sub-string divisibility			Click Here	
Pentagon numbers			Click Here	
Triangular, pentagonal, and hexagonal			Click Here	
Goldbach's other conjecture			Click Here	
Distinct primes factors			Click Here	
Self powers			Click Here	
Prime permutations			Click Here	
Consecutive prime sum			Click Here	
Prime digit replacements			Click Here	
Permuted multiples			Click Here	
Combinatoric selections			Click Here	
Poker hands			Click Here	
Lychrel numbers			Click Here	
Powerful digit sum			Click Here	
Square root convergents			Click Here	
Spiral primes			Click Here	
XOR decryption			Click Here	
Prime pair sets			Click Here	
Cyclical figurate numbers			Click Here	
Cubic permutations			Click Here	
Powerful digit counts			Click Here	
Odd period square roots			Click Here	
Convergents of e			Click Here	
Diophantine equation			Click Here	
Maximum path sum II			Click Here	
Magic 5-gon ring			Click Here	
Totient maximum			Click Here	
Totient permutation			Click Here	
Ordered fractions			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Counting fractions			Click Here	
Counting fractions in a range			Click Here	
Digit factorial chains			Click Here	
Singular integer right triangles			Click Here	
Counting summations			Click Here	
Prime summations			Click Here	
Coin partitions			Click Here	
Passcode derivation			Click Here	
Square root digital expansion			Click Here	
Path sum: two ways			Click Here	
Path sum: three ways			Click Here	
Path sum: four ways			Click Here	
Monopoly odds			Click Here	
Counting rectangles			Click Here	
Cuboid route			Click Here	
Prime power triples			Click Here	
Product-sum numbers			Click Here	
Roman numerals			Click Here	
Cube digit pairs			Click Here	
Right triangles with integer coordinates			Click Here	
Square digit chains			Click Here	
Arithmetic expressions			Click Here	
Almost equilateral triangles			Click Here	
Amicable chains			Click Here	
Su Doku			Click Here	
Large non-Mersenne prime			Click Here	
Anagramic squares			Click Here	
Largest exponential			Click Here	
Arranged probability			Click Here	
Optimum polynomial			Click Here	
Triangle containment			Click Here	
Special subset sums: optimum			Click Here	
Pandigital Fibonacci ends			Click Here	
Special subset sums: testing			Click Here	
Special subset sums: meta-testing			Click Here	
Minimal network			Click Here	
Diophantine reciprocals I			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Darts			Click Here	
Diophantine reciprocals II			Click Here	
Primes with runs			Click Here	
Bouncy numbers			Click Here	
Non-bouncy numbers			Click Here	
Counting block combinations I			Click Here	
Counting block combinations II			Click Here	
Red, green or blue tiles			Click Here	
Red, green, and blue tiles			Click Here	
Pandigital prime sets			Click Here	
Digit power sum			Click Here	
Square remainders			Click Here	
Disc game prize fund			Click Here	
Efficient exponentiation			Click Here	
Prime square remainders			Click Here	
Ordered radicals			Click Here	
Palindromic sums			Click Here	
Cuboid layers			Click Here	
abc-hits			Click Here	
Hexagonal tile differences			Click Here	
Repunit divisibility			Click Here	
Composites with prime repunit property			Click Here	
Prime cube partnership			Click Here	
Large repunit factors			Click Here	
Repunit nonfactors			Click Here	
Prime pair connection			Click Here	
Same differences			Click Here	
Singleton difference			Click Here	
Fibonacci golden nuggets			Click Here	
Special isosceles triangles			Click Here	
Pythagorean tiles			Click Here	
Modified Fibonacci golden nuggets			Click Here	
Investigating progressive numbers,			Click Here	
Perfect Square Collection			Click Here	
Investigating the Torricelli point of a triangle			Click Here	
Investigating multiple reflections of a laser beam			Click Here	
How many reversible numbers are there below one-billion?			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Investigating a Prime Pattern			Click Here	
Rectangles in cross-hatched grids			Click Here	
Exploring Pascal's triangle			Click Here	
Searching for a maximum-sum subsequence			Click Here	
Searching a triangular array for a sub-triangle having minimum-sum			Click Here	
Paper sheets of standard sizes: an expected-value problem			Click Here	
Writing 1/2 as a sum of inverse squares			Click Here	
Investigating Gaussian Integers			Click Here	
Exploring Pascal's pyramid			Click Here	
Counting Capacitor Circuits			Click Here	
Counting Digits			Click Here	
Solving the diophantine equation			Click Here	
Exploring strings for which only one character comes lexicographically after its neighbour to the left			Click Here	
Digital root sums of factorisations			Click Here	
Factorial trailing digits			Click Here	
Triominoes			Click Here	
Hexadecimal numbers			Click Here	
Cross-hatched triangles			Click Here	
Numbers for which no three consecutive digits have a sum greater than a given value			Click Here	
Intersections			Click Here	
Criss Cross			Click Here	
Investigating Ulam sequences			Click Here	
Number Rotations			Click Here	
Exploring the number of different ways a number can be expressed as a sum of powers of 2			Click Here	
Find the largest 0 to 9 pandigital that can be formed by concatenating products			Click Here	
Finding numbers for which the sum of the squares of the digits is a square			Click Here	
Investigating numbers with few repeated digits			Click Here	
Using up to one million tiles how many different "hollow" square laminae can be formed?			Click Here	
Counting the number of "hollow" square laminae that can form one, two, three, ... distinct arrangements			Click Here	
Fractions involving the number of different ways a number can be expressed as a sum of powers of 2			Click Here	
Right-angled triangles that share a cathetus			Click Here	
Integer angled Quadrilaterals			Click Here	
Step Numbers			Click Here	
Consecutive positive divisors			Click Here	
Rational zeros of a function of three variables			Click Here	
Investigating in how many ways objects of two different colours can be grouped			Click Here	
RSA encryption			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Maximum product of parts			Click Here	
Triangles containing the origin			Click Here	
Number Mind			Click Here	
Connectedness of a network			Click Here	
Semiprimes			Click Here	
The hyperexponentiation of a number			Click Here	
Tri-colouring a triangular grid			Click Here	
Maximising a weighted product			Click Here	
Prize Strings			Click Here	
Best Approximations			Click Here	
Squarefree Numbers			Click Here	
Coloured Configurations			Click Here	
Inscribed circles of triangles with one angle of 60 degrees			Click Here	
Prime triplets			Click Here	
Investigating the behaviour of a recursively defined sequence			Click Here	
Ambiguous Numbers			Click Here	
Iterative Circle Packing			Click Here	
Find the 200th prime-proof sqube containing the contiguous sub-string "200"			Click Here	
Subsets with a unique sum			Click Here	
Laserbeam			Click Here	
Squarefree Binomial Coefficients			Click Here	
Generalised Hamming Numbers			Click Here	
Dice Game			Click Here	
Concealed Square			Click Here	
Integer partition equations			Click Here	
Robot Walks			Click Here	
Circular Logic			Click Here	
Obtuse Angled Triangles			Click Here	
Divisor Square Sum			Click Here	
Combined Volume of Cuboids			Click Here	
Flea Circus			Click Here	
Totient Chains			Click Here	
Crack-free Walls			Click Here	
Investigating the primality of numbers of the form 2			Click Here	
Balanced Numbers			Click Here	
Perfect right-angled triangles			Click Here	
Skew-cost coding			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Heighway Dragon			Click Here	
Alexandrian Integers			Click Here	
Sphere Packing			Click Here	
Almost right-angled triangles I			Click Here	
Almost right-angled triangles II			Click Here	
Tribonacci non-divisors			Click Here	
A Scoop of Blancmange			Click Here	
The Chase			Click Here	
Minkowski Sums			Click Here	
Four Representations using Squares			Click Here	
Fibonacci Words			Click Here	
The prime factorisation of binomial coefficients			Click Here	
The Race			Click Here	
Lattice points on a circle			Click Here	
Semidivisible numbers			Click Here	
An Arithmetic Geometric sequence			Click Here	
Luxury Hampers			Click Here	
Tours on a 4 x n playing board			Click Here	
Infinite string tour			Click Here	
Twenty-two Foolish Primes			Click Here	
Top Dice			Click Here	
Perfection Quotients			Click Here	
Odd Triplets			Click Here	
Resilience			Click Here	
Sliders			Click Here	
Coresilience			Click Here	
Tangents to an ellipse			Click Here	
Squares under a hyperbola			Click Here	
Numbers for which Euler’s totient function equals 13!			Click Here	
Prime Subset Sums			Click Here	
250250			Click Here	
Cardano Triplets			Click Here	
Convex Holes			Click Here	
Tidying up			Click Here	
Sums of Digit Factorials			Click Here	
Rounded Square Roots			Click Here	
Tatami-Free Rooms			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Angular Bisectors			Click Here	
A lagged Fibonacci sequence			Click Here	
Reachable Numbers			Click Here	
Stone Game			Click Here	
Pivotal Square Sums			Click Here	
Mountain Range			Click Here	
An engineers' dream come true			Click Here	
Triangle Centres			Click Here	
Binary Circles			Click Here	
Pseudo Square Root			Click Here	
Billionaire			Click Here	
Counting numbers with at least four distinct prime factors less than 100			Click Here	
Polynomials with at least one integer root			Click Here	
Cutting Squares			Click Here	
Modular Cubes, part 1			Click Here	
Modular Cubes, part 2			Click Here	
Sum of Squares			Click Here	
Divisibility Multipliers			Click Here	
Balanced Sculptures			Click Here	
Primitive Triangles			Click Here	
A Modified Collatz sequence			Click Here	
Linear Combinations of Semiprimes			Click Here	
Triangles with integral sides and an integral angle			Click Here	
Ant and seeds			Click Here	
Pizza Toppings			Click Here	
The Ackermann function			Click Here	
Integer sided triangles for which the area/perimeter ratio is integral			Click Here	
Steady Squares			Click Here	
Pythagorean odds			Click Here	
Scoring probabilities			Click Here	
Quadtree encoding (a simple compression algorithm)			Click Here	
An enormous factorial			Click Here	
Eulerian Cycles			Click Here	
Digital Signature			Click Here	
Panaitopol Primes			Click Here	
Pythagorean Polygons			Click Here	
Pseudo-Fortunate Numbers			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Sum of digits - experience #23			Click Here	
Lenticular holes			Click Here	
Angular Bisector and Tangent			Click Here	
Zeckendorf Representation			Click Here	
Selective Amnesia			Click Here	
Three similar triangles			Click Here	
Protein folding			Click Here	
Nim			Click Here	
Strong Achilles Numbers			Click Here	
Multiples with small digits			Click Here	
Primonacci			Click Here	
Reflexive Position			Click Here	
Paper-strip Game			Click Here	
Chip Defects			Click Here	
An amazing Prime-generating Automaton			Click Here	
Integer Ladders			Click Here	
Nim Square			Click Here	
Biclinic Integral Quadrilaterals			Click Here	
Cyclic paths on Sierpiński graphs			Click Here	
Sliding game			Click Here	
The Mouse on the Moon			Click Here	
Digital root clocks			Click Here	
Numbers in decimal expansions			Click Here	
Firecracker			Click Here	
2011 nines			Click Here	
Bounded Sequences			Click Here	
Factorials divisible by a huge integer			Click Here	
Swapping Counters			Click Here	
Binomial coefficients divisible by 10			Click Here	
Bitwise-OR operations on random integers			Click Here	
Building a tower			Click Here	
Stone Game II			Click Here	
Modulo Summations			Click Here	
Rooms of Doom			Click Here	
Lowest-cost Search			Click Here	
Prime Frog			Click Here	
Euler's Number			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Cross flips			Click Here	
Spherical triangles			Click Here	
Special partitions			Click Here	
Spilling the beans			Click Here	
Gathering the beans			Click Here	
Maximix Arrangements			Click Here	
Totient Stairstep Sequences			Click Here	
Cutting Rectangular Grid Paper			Click Here	
Peredur fab Efrawg			Click Here	
Crazy Function			Click Here	
Golomb's self-describing sequence			Click Here	
The totient of a square is a cube			Click Here	
Fractional Sequences			Click Here	
Silver dollar game			Click Here	
Matrix Sum			Click Here	
Strong Repunits			Click Here	
Largest integer divisible by two primes			Click Here	
Sum of a square and a cube			Click Here	
Langton's ant			Click Here	
Constraining the least greatest and the greatest least			Click Here	
Hexagonal orchards			Click Here	
Blood tests			Click Here	
Risky moon			Click Here	
Distances in a bee's honeycomb			Click Here	
Maximal coprime subset			Click Here	
Largest roots of cubic polynomials			Click Here	
Prime generating integers			Click Here	
Cyclic numbers			Click Here	
Hilbert's New Hotel			Click Here	
Scary Sphere			Click Here	
Subsequence of Thue-Morse sequence			Click Here	
Squarefree factors			Click Here	
Bézier Curves			Click Here	
Comfortable distance			Click Here	
A huge binomial coefficient			Click Here	
Stone Game III			Click Here	
Bozo sort			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
A Kempner-like series			Click Here	
Badugi			Click Here	
Geometric triangles			Click Here	
Licence plates			Click Here	
Pencils of rays			Click Here	
Circumscribed Circles			Click Here	
Maximum Integer Partition Product			Click Here	
Minimum of subsequences			Click Here	
Nontransitive sets of dice			Click Here	
Sum of digits, experience 13			Click Here	
Triangle Triples			Click Here	
Least common multiple count			Click Here	
Amazing Mazes!			Click Here	
(prime-k) factorial			Click Here	
Generating polygons			Click Here	
Divisibility comparison between factorials			Click Here	
Rudin-Shapiro sequence			Click Here	
Ellipses inside triangles			Click Here	
Maximum length of an antichain			Click Here	
Harshad Numbers			Click Here	
Distinct Lines			Click Here	
Platonic Dice			Click Here	
Triangles with non rational sides and integral area			Click Here	
Hopping Game			Click Here	
Enmeshed unit circle			Click Here	
Migrating ants			Click Here	
Eating pie			Click Here	
Pythagorean tree			Click Here	
Weak Goodstein sequence			Click Here	
Triangle on parabola			Click Here	
Cutting rope			Click Here	
Squarefree Fibonacci Numbers			Click Here	
Fibonacci tree game			Click Here	
Sum of squares of divisors			Click Here	
Integer-valued polynomials			Click Here	
Lattice points enclosed by parabola and line			Click Here	
Crisscross Ellipses			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
A rectangular tiling			Click Here	
Guessing Game			Click Here	
Idempotents			Click Here	
Admissible paths through a grid			Click Here	
Nim Extreme			Click Here	
Circle and tangent line			Click Here	
Uphill paths			Click Here	
Gnomon numbering			Click Here	
One-child Numbers			Click Here	
Kaprekar constant			Click Here	
Titanic sets			Click Here	
A frog's trip			Click Here	
Reciprocal cycles II			Click Here	
Factorisation triples			Click Here	
Look and say sequence			Click Here	
2x2 positive integer matrix			Click Here	
Prime factors of			Click Here	
Sequence of points on a hyperbola			Click Here	
Consecutive die throws			Click Here	
Kakuro			Click Here	
Prime connection			Click Here	
Box-ball system			Click Here	
n-sequences			Click Here	
Necklace of circles			Click Here	
Sum of squares of unitary divisors			Click Here	
Range flips			Click Here	
Square Space Silo			Click Here	
Totient sum			Click Here	
Steps in Euclid's algorithm			Click Here	
Rigid graphs			Click Here	
Polynomials of Fibonacci numbers			Click Here	
Unfair wager			Click Here	
Fibonacci primitive roots			Click Here	
Integer part of polynomial equation's solutions			Click Here	
Sum of sum of divisors			Click Here	
GCD and Tiling			Click Here	
The inverse summation of coprime couples			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Eleven-free integers			Click Here	
GCD sequence			Click Here	
The Roundtable Lottery			Click Here	
Retractions A			Click Here	
Retractions B			Click Here	
Retractions C			Click Here	
Average least common multiple			Click Here	
Chocolate covered candy			Click Here	
Hypocycloid and Lattice points			Click Here	
Modular inverses			Click Here	
Long Products			Click Here	
Lattice Quadrilaterals			Click Here	
Diophantine reciprocals III			Click Here	
Powers With Trailing Digits			Click Here	
Triangles containing the origin II			Click Here	
A polynomial modulo the square of a prime			Click Here	
Permutations of Project			Click Here	
Flipping game			Click Here	
An ant on the move			Click Here	
Almost Pi			Click Here	
Permutation of 3-smooth numbers			Click Here	
A weird recurrence relation			Click Here	
Möbius function and intervals			Click Here	
Polar polygons			Click Here	
Distinct terms in a multiplication table			Click Here	
Superinteger			Click Here	
Smooth divisors of binomial coefficients			Click Here	
Empty chairs			Click Here	
Super Ramvok			Click Here	
Triangle inscribed in ellipse			Click Here	
Comfortable Distance II			Click Here	
Phigital number base			Click Here	
Last digits of divisors			Click Here	
Music festival			Click Here	
Circle Packing II			Click Here	
Number Sequence Game			Click Here	
Mixtures			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Roots on the Rise			Click Here	
The Last Question			Click Here	
Chef Showdown			Click Here	
The incenter of a triangle			Click Here	
Repeated permutation			Click Here	
Arithmetic Derivative			Click Here	
Maximum number of divisors			Click Here	
Palindrome-containing strings			Click Here	
Sums of power sums			Click Here	
Unbalanced Nim			Click Here	
Common factors between two sequences			Click Here	
Jumping frog			Click Here	
Double pandigital number divisible by 11			Click Here	
Exploding sequence			Click Here	
Under The Rainbow			Click Here	
Collatz prefix families			Click Here	
Writing n as the product of k distinct positive integers			Click Here	
Incenter and circumcenter of triangle			Click Here	
Drunken Tower of Hanoi			Click Here	
Remainder of polynomial division			Click Here	
St. Petersburg Lottery			Click Here	
Problem 500!!!			Click Here	
Eight Divisors			Click Here	
Counting Castles			Click Here	
Compromise or persist			Click Here	
Square on the Inside			Click Here	
Bidirectional Recurrence			Click Here	
Clock sequence			Click Here	
Shortest Lattice Vector			Click Here	
Integers in base i-1			Click Here	
Divisor Nim			Click Here	
Tangent Circles			Click Here	
Sequences with nice divisibility properties			Click Here	
Sums of totients of powers			Click Here	
Integral median			Click Here	
Geoboard Shapes			Click Here	
Dissonant Numbers			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
5-smooth totients			Click Here	
A real recursion			Click Here	
Prime triples and geometric sequences			Click Here	
Tricolored Coin Fountains			Click Here	
Simbers			Click Here	
Smallest prime factor			Click Here	
Hilbert's Blackout			Click Here	
First Sort I			Click Here	
First Sort II			Click Here	
Rolling Ellipse			Click Here	
Largest prime factors of consecutive numbers			Click Here	
Randomized Binary Search			Click Here	
Constrained Sums			Click Here	
10-substrings			Click Here	
GCD of Divisors			Click Here	
Chinese leftovers			Click Here	
Nanobots on Geodesics			Click Here	
Minimum values of the Carmichael function			Click Here	
Weak Queens			Click Here	
Fractal Sequence			Click Here	
Modulo power identity			Click Here	
Counting tuples			Click Here	
Maximum quadrilaterals			Click Here	
Odd elimination			Click Here	
Counting primitive Pythagorean triples			Click Here	
Divisibility of Harmonic Number Denominators			Click Here	
Geometric Progression with Maximum Sum			Click Here	
Prime-Sum Numbers			Click Here	
Chromatic Conundrum			Click Here	
Faulhaber's Formulas			Click Here	
Sum "A+B"			Click Here	
Sum in Loop			Click Here	
Sums in Loop			Click Here	
Minimum of Two			Click Here	
Minimum of Three			Click Here	
Maximum of array			Click Here	
Rounding			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Fahrenheit to Celsius			Click Here	
Vowel Count			Click Here	
Median of Three			Click Here	
Body Mass Index			Click Here	
Sum of digits			Click Here	
Dice Rolling			Click Here	
Weighted sum of digits			Click Here	
Average of an array			Click Here	
Arithmetic Progression			Click Here	
Array Checksum			Click Here	
Triangles			Click Here	
Array Counters			Click Here	
Reverse String			Click Here	
Collatz Sequence			Click Here	
Modular Calculator			Click Here	
Bubble Sort			Click Here	
Modulo and time difference			Click Here	
Linear Function			Click Here	
Greatest Common Divisor			Click Here	
Sort with Indexes			Click Here	
Fibonacci Sequence			Click Here	
Neumann's Random Generator			Click Here	
Palindromes			Click Here	
Smoothing the Weather			Click Here	
Bubble in Array			Click Here	
Square Root			Click Here	
Rotate String			Click Here	
Bicycle Race			Click Here	
Pythagorean Theorem			Click Here	
Josephus Problem			Click Here	
Bit Count			Click Here	
Double Dice Roll			Click Here	
Savings Calculator			Click Here	
Caesar Shift Cipher			Click Here	
Linear Congruential Generator			Click Here	
Matching Words			Click Here	
Triangle Area			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Prime Numbers Generation			Click Here	
Matching Brackets			Click Here	
Rock Paper Scissors			Click Here	
Card Names			Click Here	
Fool's Day 2014			Click Here	
Bulls and Cows			Click Here	
Combinations Counting			Click Here	
Binary Search			Click Here	
Two Printers			Click Here	
Parity Control			Click Here	
Quadratic Equation			Click Here	
Blackjack Counting			Click Here	
Selection Sort			Click Here	
King and Queen			Click Here	
Cards Shuffling			Click Here	
Funny Words Generator			Click Here	
Integer Factorization			Click Here	
Fibonacci Divisibility			Click Here	
Tic-Tac-Toe			Click Here	
Mortgage Calculator			Click Here	
Insertion Sort			Click Here	
Flying Text Screensaver			Click Here	
Anagrams			Click Here	
Share Price Volatility			Click Here	
Tricky Printing			Click Here	
Prime Ranges			Click Here	
Yacht or Dice Poker			Click Here	
Clock Hands			Click Here	
Hexagonal Grid			Click Here	
Code Guesser			Click Here	
Luhn Algorithm			Click Here	
Summing Up			Click Here	
Duel Chances			Click Here	
Pythagorean Triples			Click Here	
Tree Height Measurement			Click Here	
Dungeons and Dragons Dice			Click Here	
QuickSort			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Girls and Pigs			Click Here	
Variable Length Code			Click Here	
Convex Polygon Area			Click Here	
Rotation in 2D Space			Click Here	
Most Frequent Word			Click Here	
Caesar Cipher Cracker			Click Here	
Azimuth at Treasure Island			Click Here	
Cloud Altitude Measurement			Click Here	
Tree Builder			Click Here	
Modular Exponentiation			Click Here	
Life is Simple			Click Here	
Brainfuck Interpreter			Click Here	
Brain Fibo			Click Here	
Point to Segment Distance			Click Here	
Say 100			Click Here	
Pitch and Notes			Click Here	
Levenshtein Distance			Click Here	
Reverse Polish Notation			Click Here	
Paths in the Grid			Click Here	
Static Web Page			Click Here	
Basics of HTML			Click Here	
Game of 2048			Click Here	
Simple Linear Regression			Click Here	
Binary Heap			Click Here	
Sequence of Squares			Click Here	
Maze Pathfinder			Click Here	
Instrument Tuner			Click Here	
Gradient Calculation			Click Here	
Sweet Harvest			Click Here	
Fibonacci Divisibility Advanced			Click Here	
Graph Generator			Click Here	
Lexicographic Permutations			Click Here	
Divide by Two			Click Here	
Four Pics One Word			Click Here	
Cycles Detection			Click Here	
Star Medals			Click Here	
Introducing Regexps			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Mul Two			Click Here	
Bezier Curves			Click Here	
Copy Line			Click Here	
Variable Length Code Unpack			Click Here	
Dynamic Web Page			Click Here	
Uphill Shooting			Click Here	
Extended Euclidean Algorithm			Click Here	
Transitive Closure on Candy States			Click Here	
Suffix Array			Click Here	
Snake Arcade			Click Here	
Breadth First Search			Click Here	
Binary Search in Array			Click Here	
Loops in Assembly			Click Here	
Bogosort			Click Here	
Billiard Ball			Click Here	
Easter Eggs			Click Here	
Dijkstra in the Network			Click Here	
Starving Priority Queue			Click Here	
Spaceship Weight Fraud			Click Here	
Pawn Move Validator			Click Here	
Depth First Search			Click Here	
Information Entropy			Click Here	
Topological Sorting			Click Here	
Enumerating Combinations			Click Here	
Lucky Tickets			Click Here	
Color Cubes			Click Here	
Safe Landing			Click Here	
Combinations with Repetitions			Click Here	
Query String Parameters			Click Here	
Proper Bracket Sequences			Click Here	
Modular Inverse			Click Here	
Base-32 Encoding			Click Here	
Knapsack of Integers			Click Here	
Huffman Coding			Click Here	
Calculation of Pi			Click Here	
Word Ladders			Click Here	
Shannon-Fano Coding			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Nim Game			Click Here	
Lucky Tickets Advanced			Click Here	
Caesar meets BF			Click Here	
Chords of Music			Click Here	
Random Search Optimization			Click Here	
Social Web Scraper			Click Here	
Page Rank			Click Here	
Beam Balance and Masses			Click Here	
Necklace Count			Click Here	
Convex Hull and Farmers			Click Here	
Prn Hex Str			Click Here	
Knapsack Backtracking			Click Here	
Crossing the Road			Click Here	
Public Key Cryptography Intro			Click Here	
Hard Life			Click Here	
Matches Picking			Click Here	
Gangster Battles			Click Here	
Employees Web App			Click Here	
Travelling Salesman			Click Here	
RSA Cryptography			Click Here	
Frodo and Black Riders			Click Here	
Look and Say binary			Click Here	
Fibonacci Randomizer			Click Here	
Travelling Salesman Inverted			Click Here	
Simple 3D Scene			Click Here	
Point in Polygon			Click Here	
LZ77 decompression			Click Here	
Neighborhood of a String			Click Here	
Hamming Codes			Click Here	
Rubik's Cube			Click Here	
Stream Cipher Breaking			Click Here	
Sliding Window Search			Click Here	
Emirp primE			Click Here	
Ground Zero			Click Here	
Gradient Descent for SLE			Click Here	
Fermat goes hacking RSA			Click Here	
Colliding Balls			Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Simple 3D Scene (cont)			Click Here	
Dancing Pairs			Click Here	
Ticket Puzzle			Click Here	
Color Cubes Advanced			Click Here	
Page Rank as Eigenvector			Click Here	
Fizz Buzz in Asm			Click Here	
Tic-Tac-Toe Minimax Algorithm			Click Here	
Prime Chains			Click Here	
Maze of the Wumpus			Click Here	
Maximum Flow			Click Here	
Knight's Tour			Click Here	
Maxit Single-Player			Click Here	
Algae Robot			Click Here	
Suffix Array Advanced			Click Here	
Wandering Star			Click Here	
Clustering the Stars			Click Here	
BCD to Hex			Click Here	
Simple Game of Sticks			Click Here	
Connect Four			Click Here	
Automated Landing			Click Here	
Micro-Life			Click Here	
Magic 8 Ball	I'm sure you've used a magic 8 ball at one point in your life. You ask it a question, turn it right side up and it gives an answer by way of a floating die with responses written on it. You can create one in python.		Click Here	
99 Bottles of Beer on the Wall Lyrics	Create a program that prints out every line to the song "99 bottles of beer on the wall."		Click Here	
Pythagorean Triples Checker	Create a program that allows the user to input the sides of any triangle, and then return whether the triangle is a Pythagorean Triple or not.		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Coin Estimator By Weight	Create a program that allows the user to input the total weight of each type of coin they have (pennies, nickels, dimes, and quarters), and then print out how many of each type of wrapper they would need, how many coins they have, and the estimated total value of all of their money.		Click Here	
Mad Libs Story Maker	Create a Mad Libs style game, where the program asks the user for certain types of words, and then prints out a story with the words that the user inputted. The story doesn't have to be too long, but it should have some sort of story line.		Click Here	
Change Calculator	Imagine that your friend is a cashier, but has a hard time counting back change to customers. Create a program that allows him to input a certain amount of change, and then print how how many quarters, dimes, nickels, and pennies are needed to make up the amount needed.		Click Here	
Mean, Median, and Mode	Create three functions that allow the user to find the mean, median, and mode of a list of numbers. If you have access or know of functions that already complete these tasks, do not use them.		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Higher-Lower Guessing Game	Create a simple game where the computer randomly selects a number between 1 and 100 and the user has to guess what the number is. After every guess, the computer should tell the user if the guess is higher or lower than the answer. When the user guesses the correct number, print out a congratulatory message.		Click Here	
Multiplication Table	Create a program that prints out a multiplication table for the numbers 1 through 9. It should include the numbers 1 through 9 on the top and left axises, and it should be relatively easy to find the product of two numbers. Do not simply write out every line manually (ie print('7 14 21 28 35 49 56 63')).		Click Here	
Fibonacci Sequence	Define a function that allows the user to find the value of the nth term in the sequence. To make sure you've written your function correctly, test the first 10 numbers of the sequence. Remember, the 0th term is 0 and the first and second term are both 1.		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Hangman Game	Create a program that selects a random word and then allows the user to guess it in a game of hangman. Like the real game, there should be blank spots for each letter in the word, and a part of the body should be added each time the user guesses a letter than is not in the answer (you may choose how many wrong turns the user can make until the game ends).		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Menu Calculator	Imagine you have started up a small restaurant and are trying to make it easier to take and calculate orders. If your restaurant only sells 9 different items, you assign each one to a number, as shown below. Chicken Strips - $3.50 French Fries - $2.50 Hamburger - $4.00 Hotdog - $3.50 Large Drink - $1.75 Medium Drink - $1.50 Milk Shake - $2.25 Salad - $3.75 Small Drink - $1.25 To quickly take orders, your program should allow the user to type in a string of numbers and then it should calculate the cost of the order. For example, if one large drink, two small drinks, two hamburgers, one hotdog, and a salad are ordered, the user should type in 5993348, and the program should say that it costs $19.50. Also, make sure that the program loops so the user can take multiple orders without having to restart the program each time.		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Dice Rolling Simulator	By using the random module, python can do things like pseudo-random number generation. So in this program, allow the user to input the amount of sides on a dice and how many times it should be rolled. From there, your program should simulate dice rolls and keep track of how many times each number comes up (this does not have to be displayed). After that, print out how many times each number came up.		Click Here	
Dice Simulator	You are about to play a board game, but you realize you don't have any dice. Fortunately you have this program. 1. Create a program that opens a new window and draws 2 six-sided dice 2. Allow the user to quit, or roll again		Click Here	
Count and Fix Green Eggs and Ham	Some of you may remember the		Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
What's My Number	Between 1 and 1000, there is only 1 number that meets the following criteria. While it could be manually figured out with pen and paper, it would be much more efficient to write a program that would do this for you. With that being said, your goal is to find out which number meets these criteria. To find out if you have the correct number, click the link at the bottom of this main post. 1)The number has two or more digits. 2)The number is prime. 3)The number does NOT contain a 1 or 7. 4)The sum of all of the digits is less than or equal to 10. 5)The first two digits add up to be odd. 6)The second to last digit is even. 7)The last digit is equal to how many digits are in the number.		Click Here	Click Here
Factors of a Number	Define a function that creates a list of all the numbers that are factors of the user's number. For example, if the function is called factor, factor(36) should return [1,2,3,4,6,9,12,18,36]. The numbers in your list should be from least to greatest, and 1 and the original number should be included.		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Countdown Clock	Create a program that allows the user to choose a time and date, and then prints out a message at given intervals (such as every second) that tells the user how much longer there is until the selected time. SUBGOALS 1) If the selected time has already passed, have the program tell the user to start over. 2) If your program asks for the year, month, day, hour, etc. separately, allow the user to be able to type in either the month name or its number. TIP: Making use of built in modules such as time and datetime can change this project from a nightmare into a much simpler task.		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Turn Based Pokemon Style Game	Write a simple game that allows the user and the computer to take turns selecting moves to use against each other. Both the computer and the player should start out at the same amount of health (such as 100), and should be able to choose between the three moves: 1) The first move should do moderate damage and has a small range (such as 18-25). 2) The second move should have a large range of damage and can deal high or low damage (such as 10-35). 3) The third move should heal whoever casts it a moderate amount, similar to the first move. After each move, a message should be printed out that tells the user what just happened, and how much health the user and computer have. Once the user or the computer's health reaches 0, the game should end. SUBGOALS 1) When someone is defeated, make sure the game prints out that their health has reached 0, and not a negative number. 2) When the computer's health reaches a set amount (such as 35%), increase it's chance to cast heal. 3) Give each move a name.		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
A Variation of 21	In this project, you will make a game similar to 21/blackjack. Since this is not an actual game (as far as I'm aware of), here the the instructions for how to play. In this version, there is only one player, and there are two types of scores - the round score and the game score. The game score will begin at 100, and the game will last for five rounds. At the beginning of the round, the player is given two random cards from a deck and they will be added together to make the player's round score. From here, the player has two options - draw another card to try to get their round score closer to 21, or they can end the round. The player can draw as many cards as they want until they end the round or their round score exceeds 21. At the end of the round, the difference between 21 and the round score is subtracted from the game score, and then the next round begins. After the five rounds, the player is given their total score and the game is over. So the point of your program is to allow the user to play the game described above. Many of the subgoals listed below can be		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Compare Recent Karma	BACKGROUND Since we're all redditors here, let's make something dealing with reddit. If you go to a user's profile and add .json to the end of it, you can get the all sorts of Json data about the user (think of Json as a giant dictionary of smaller dictionaries and lists). For example, if I go to my own profile and view it's Json data, it would look like this. At first it might look intimidating, but if you break it down, you can see it's just one giant dictionary with all sorts of information about my latest posts. GOAL Create a program that gets information about two different users, and then sees whose most recent post received the most karma. The program should then print out which user received more karma, and what the difference was. This is a pretty open project, so I encourage you to take it further by adding more features if you find it interesting. Remember - Elements in a list are referenced by their index numbers while entries in a dictionary are referenced by their keys. SUBGOALS 1) Allow the user to put in the name of two different users when the program first		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Watch for new TIL facts	BACKGROUND If you finished the previous project which compared the karma of two new comments, hopefully you learned a thing or two about receiving data from Reddit's API. Now you're going to take this a step further, and even have the opportunity to make a basic twitter bot. GOAL Create a program that receives data from the /r/todayilearned subreddit, and looks for new facts that have been posted. Each time the program comes across a new fact, the fact should be printed into the command line. However, phrases like "TIL ", "TIL that", etc should be removed so the only thing that is printed is the fact. There are a couple things to note about this since you'll more than likely be using a loop to check for new posts. According to Reddit's API Access Rules Page, the API pages are only updated once every thirty seconds, so you'll have to have your code pause for at least thirty seconds before it tries to find more posts. Secondly, if for some reason you decide to try to get data sooner than every thirty seconds, make sure to not send more than thirty		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Random Wikipedia Article	BACKGROUND If you've been to Wikipedia, you may have noticed that there is a link to a random article on the left side of the screen. While it can be fun to see what article you get taken to, sometimes it would be nice to see the name of the article so you can skip it if it sounds boring. Luckily, Wikipedia has an API that allows us to do so. However, there is a dilemma. Since Wikipedia has articles about topics from all over the world, some of them have special characters in the title. For example, the article about the spanish painter Erasto Cortés Juárez has é and á in it. If you look at this specific article's API, you will see that the title is "Erasto Cort\u00e9s Ju\u00e1rez" and that the \u00e9 and \u00e1 are replacing the two previously mentioned letters. (For information about what this is, start by checking out the first half of this page in the documentation). To make your program work, you're going to have to handle this problem somehow. GOAL Create a program that pulls titles from the official Wikipedia API and then asks the user one by one if he or she would like to read about		Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
What's the Weather?	GOAL Create a program that pulls data from OpenWeatherMap.org that prints out information about the current weather, such as the high, the low, and the amount of rain for wherever you live. Depending on how skilled you are, you can actually do some neat stuff with this project. SUBGOALS 1) Print out data for the next 5-7 days so you have a 5 day/week long forecast. 2) Print the data to another file that you can open up and view at, instead of viewing the information in the command line. 3) If you know html, write a file that you can print information to so that your project is more interesting. TIPS APIs that are in Json are essentially lists and dictionaries. Remember that to reference something in a list, you must refer to it by what number element it is in the list, and to reference a key in a dictionary, you must refer to it by it's name. Don't like Celsius? Add &units=imperial to the end of the URL of the API to receive your data in Fahrenheit.		Click Here	
Find PI to the Nth Digit	Enter a number and have the program generate PI up to that many decimal places. Keep a limit to how far the program will go.	Numbers	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Find e to the Nth Digit	Just like the previous problem, but with e instead of PI. Enter a number and have the program generate e up to that many decimal places. Keep a limit to how far the program will go.	Numbers	Click Here	Click Here
Fibonacci Sequence	Enter a number and have the program generate the Fibonacci sequence to that number or to the Nth number.	Numbers	Click Here	Click Here
Prime Factorization	Have the user enter a number and find all Prime Factors (if there are any) and display them.	Numbers	Click Here	Click Here
Next Prime Number	Have the program find prime numbers until the user chooses to stop asking for the next one.	Numbers	Click Here	Click Here
Find Cost of Tile to Cover W x H Floor	Calculate the total cost of tile it would take to cover a floor plan of width and height, using a cost entered by the user.	Numbers	Click Here	Click Here
Mortgage Calculator	Calculate the monthly payments of a fixed term mortgage over given Nth terms at a given interest rate. Also figure out how long it will take the user to pay back the loan. For added complexity, add an option for users to select the compounding interval (Monthly, Weekly, Daily, Continually).	Numbers	Click Here	Click Here
Change Return Program	The user enters a cost and then the amount of money given. The program will figure out the change and the number of quarters, dimes, nickels, pennies needed for the change.	Numbers	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Binary to Decimal and Back Converter	Develop a converter to convert a decimal number to binary or a binary number to its decimal equivalent.	Numbers	Click Here	Click Here
Calculator	A simple calculator to do basic operators. Make it a scientific calculator for added complexity.	Numbers	Click Here	Click Here
Unit Converter (temp, currency, volume, m	Converts various units between one another. The user enters the type of unit being entered, the type of unit they want to convert to and then the value. The program will then make the conversion.	Numbers	Click Here	Click Here
Alarm Clock	A simple clock where it plays a sound after X number of minutes/seconds or at a particular time.	Numbers	Click Here	Click Here
Distance Between Two Cities	Calculates the distance between two cities and allows the user to specify a unit of distance. This program may require finding coordinates for the cities like latitude and longitude.	Numbers	Click Here	Click Here
Credit Card Validator	Takes in a credit card number from a common credit card vendor (Visa, MasterCard, American Express, Discoverer) and validates it to make sure that it is a valid number (look into how credit cards use a checksum).	Numbers	Click Here	Click Here
Tax Calculator	Asks the user to enter a cost and either a country or state tax. It then returns the tax plus the total cost with tax.	Numbers	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Factorial Finder	The Factorial of a positive integer, n, is defined as the product of the sequence n, n-1, n-2, ...1 and the factorial of zero, 0, is defined as being 1. Solve this using both loops and recursion.	Numbers	Click Here	Click Here
Complex Number Algebra	Show addition, multiplication, negation, and inversion of complex numbers in separate functions. (Subtraction and division operations can be made with pairs of these operations.) Print the results for each operation tested.	Numbers	Click Here	Click Here
Happy Numbers	A happy number is defined by the following process. Starting with any positive integer, replace the number by the sum of the squares of its digits, and repeat the process until the number equals 1 (where it will stay), or it loops endlessly in a cycle which does not include 1. Those numbers for which this process ends in 1 are happy numbers, while those that do not end in 1 are unhappy numbers. Display an example of your output here. Find first 8 happy numbers.	Numbers	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Number Names	Show how to spell out a number in English. You can use a preexisting implementation or roll your own, but you should support inputs up to at least one million (or the maximum value of your language's default bounded integer type, if that's less). Optional: Support for inputs other than positive integers (like zero, negative integers, and floating-point numbers).	Numbers	Click Here	Click Here
Coin Flip Simulation	Write some code that simulates flipping a single coin however many times the user decides. The code should record the outcomes and count the number of tails and heads.	Numbers	Click Here	Click Here
Limit Calculator	Ask the user to enter f(x) and the limit value, then return the value of the limit statement Optional: Make the calculator capable of supporting infinite limits.	Numbers	Click Here	Click Here
Fast Exponentiation	Ask the user to enter 2 integers a and b and output a^b (i.e. pow(a,b)) in O(lg n) time complexity.	Numbers	Click Here	Click Here
Collatz Conjecture	Start with a number n > 1. Find the number of steps it takes to reach one using the following process: If n is even, divide it by 2. If n is odd, multiply it by 3 and add 1.	Classic Algorithms	Click Here	Click Here
Sorting	Implement two types of sorting algorithms: Merge sort and bubble sort.	Classic Algorithms	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Closest pair problem	The closest pair of points problem or closest pair problem is a problem of computational geometry: given n points in metric space, find a pair of points with the smallest distance between them.	Classic Algorithms	Click Here	Click Here
Sieve of Eratosthenes	The sieve of Eratosthenes is one of the most efficient ways to find all of the smaller primes (below 10 million or so).	Classic Algorithms	Click Here	Click Here
Graph from links	Create a program that will create a graph or network from a series of links.	Graph	Click Here	Click Here
Eulerian Path	Create a program which will take as an input a graph and output either a Eulerian path or a Eulerian cycle, or state that it is not possible. A Eulerian Path starts at one node and traverses every edge of a graph through every node and finishes at another node. A Eulerian cycle is a eulerian Path that starts and finishes at the same node.	Graph	Click Here	Click Here
Connected Graph	Create a program which takes a graph as an input and outputs whether every node is connected or not.	Graph	Click Here	Click Here
Dijkstra's Algorithm	Create a program that finds the shortest path through a graph using its edges.	Graph	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Minimum Spanning Tree	Create a program which takes a connected, undirected graph with weights and outputs the minimum spanning tree of the graph i.e., a subgraph that is a tree, contains all the vertices, and the sum of its weights is the least possible.	Graph	Click Here	Click Here
Inverted index	An Inverted Index is a data structure used to create full text search. Given a set of text files, implement a program to create an inverted index. Also create a user interface to do a search using that inverted index which returns a list of files that contain the query term / terms. The search index can be in memory.	Data Structures	Click Here	Click Here
Fizz Buzz	Write a program that prints the numbers from 1 to 100. But for multiples of three print “Fizz” instead of the number and for the multiples of five print “Buzz”. For numbers which are multiples of both three and five print “FizzBuzz”.	Text	Click Here	Click Here
Reverse a String	Enter a string and the program will reverse it and print it out.	Text	Click Here	Click Here
Pig Latin	Pig Latin is a game of alterations played on the English language game. To create the Pig Latin form of an English word the initial consonant sound is transposed to the end of the word and an ay is affixed (Ex.: "banana" would yield anana-bay). Read Wikipedia for more information on rules.	Text	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Count Vowels	Enter a string and the program counts the number of vowels in the text. For added complexity have it report a sum of each vowel found.	Text	Click Here	Click Here
Check if Palindrome	Checks if the string entered by the user is a palindrome. That is that it reads the same forwards as backwards like “racecar”	Text	Click Here	Click Here
Count Words in a String	Counts the number of individual words in a string. For added complexity read these strings in from a text file and generate a summary.	Text	Click Here	Click Here
Text Editor	Notepad style application that can open, edit, and save text documents. Optional: Add syntax highlighting and other features.	Text	Click Here	Click Here
RSS Feed Creator	Given a link to RSS/Atom Feed, get all posts and display them.	Text	Click Here	Click Here
Quote Tracker (market symbols etc)	A program which can go out and check the current value of stocks for a list of symbols entered by the user. The user can set how often the stocks are checked. For CLI, show whether the stock has moved up or down. Optional: If GUI, the program can show green up and red down arrows to show which direction the stock value has moved.	Text	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Guestbook / Journal	A simple application that allows people to add comments or write journal entries. It can allow comments or not and timestamps for all entries. Could also be made into a shout box. Optional: Deploy it on Google App Engine or Heroku or any other PaaS (if possible, of course).	Text	Click Here	Click Here
Vigenere / Vernam / Ceasar Ciphers	Functions for encrypting and decrypting data messages. Then send them to a friend.	Text	Click Here	Click Here
Regex Query Tool	A tool that allows the user to enter a text string and then in a separate control enter a regex pattern. It will run the regular expression against the source text and return any matches or flag errors in the regular expression.	Text	Click Here	Click Here
FTP Program	A file transfer program which can transfer files back and forth from a remote web sever.	Networking	Click Here	Click Here
Bandwidth Monitor	A small utility program that tracks how much data you have uploaded and downloaded from the net during the course of your current online session. See if you can find out what periods of the day you use more and less and generate a report or graph that shows it.	Networking	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Port Scanner	Enter an IP address and a port range where the program will then attempt to find open ports on the given computer by connecting to each of them. On any successful connections mark the port as open.	Networking	Click Here	Click Here
Mail Checker (POP3 / IMAP)	The user enters various account information include web server and IP, protocol type (POP3 or IMAP) and the application will check for email at a given interval.	Networking	Click Here	Click Here
Country from IP Lookup	Enter an IP address and find the country that IP is registered in. Optional: Find the Ip automatically.	Networking	Click Here	Click Here
Whois Search Tool	Enter an IP or host address and have it look it up through whois and return the results to you.	Networking	Click Here	Click Here
Site Checker with Time Scheduling	An application that attempts to connect to a website or server every so many minutes or a given time and check if it is up. If it is down, it will notify you by email or by posting a notice on screen.	Networking	Click Here	Click Here
Product Inventory Project	Create an application which manages an inventory of products. Create a product class which has a price, id, and quantity on hand. Then create an inventory class which keeps track of various products and can sum up the inventory value.	Classes	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Airline / Hotel Reservation System	Create a reservation system which books airline seats or hotel rooms. It charges various rates for particular sections of the plane or hotel. Example, first class is going to cost more than coach. Hotel rooms have penthouse suites which cost more. Keep track of when rooms will be available and can be scheduled.	Classes	Click Here	Click Here
Company Manager	Create an hierarchy of classes - abstract class Employee and subclasses HourlyEmployee, SalariedEmployee, Manager and Executive. Every one's pay is calculated differently, research a bit about it. After you've established an employee hierarchy, create a Company class that allows you to manage the employees. You should be able to hire, fire and raise employees.	Classes	Click Here	Click Here
Bank Account Manager	Create a class called Account which will be an abstract class for three other classes called CheckingAccount, SavingsAccount and BusinessAccount. Manage credits and debits from these accounts through an ATM style program.	Classes	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Patient / Doctor Scheduler	Create a patient class and a doctor class. Have a doctor that can handle multiple patients and setup a scheduling program where a doctor can only handle 16 patients during an 8 hr work day.	Classes	Click Here	Click Here
Recipe Creator and Manager	Create a recipe class with ingredients and a put them in a recipe manager program that organizes them into categories like deserts, main courses or by ingredients like chicken, beef, soups, pies etc.	Classes	Click Here	Click Here
Image Gallery	Create an image abstract class and then a class that inherits from it for each image type. Put them in a program which displays them in a gallery style format for viewing.	Classes	Click Here	Click Here
Shape Area and Perimeter Classes	Create an abstract class called Shape and then inherit from it other shapes like diamond, rectangle, circle, triangle etc. Then have each class override the area and perimeter functionality to handle each shape type.	Classes	Click Here	Click Here
Flower Shop Ordering To Go	Create a flower shop application which deals in flower objects and use those flower objects in a bouquet object which can then be sold. Keep track of the number of objects and when you may need to order more.	Classes	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Family Tree Creator	Create a class called Person which will have a name, when they were born and when (and if) they died. Allow the user to create these Person classes and put them into a family tree structure. Print out the tree to the screen.	Classes	Click Here	Click Here
Create A Progress Bar for Downloads	Create a progress bar for applications that can keep track of a download in progress. The progress bar will be on a separate thread and will communicate with the main thread using delegates.	Threading	Click Here	Click Here
Bulk Thumbnail Creator	Picture processing can take a bit of time for some transformations. Especially if the image is large. Create an image program which can take hundreds of images and converts them to a specified size in the background thread while you do other things. For added complexity, have one thread handling re-sizing, have another bulk renaming of thumbnails etc.	Threading	Click Here	Click Here
Page Scraper	Create an application which connects to a site and pulls out all links, or images, and saves them to a list. Optional: Organize the indexed content and don't allow duplicates. Have it put the results into an easily searchable index file.	Web	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Online White Board	Create an application which allows you to draw pictures, write notes and use various colors to flesh out ideas for projects. Optional: Add feature to invite friends to collaborate on a white board online.	Web	Click Here	Click Here
Get Atomic Time from Internet Clock	This program will get the true atomic time from an atomic time clock on the Internet. Use any one of the atomic clocks returned by a simple Google search.	Web	Click Here	Click Here
Fetch Current Weather	Get the current weather for a given zip/postal code. Optional: Try locating the user automatically.	Web	Click Here	Click Here
Scheduled Auto Login and Action	Make an application which logs into a given site on a schedule and invokes a certain action and then logs out. This can be useful for checking web mail, posting regular content, or getting info for other applications and saving it to your computer.	Web	Click Here	Click Here
E-Card Generator	Make a site that allows people to generate their own little e-cards and send them to other people. Do not use Flash. Use a picture library and perhaps insightful mottos or quotes.	Web	Click Here	Click Here
Content Management System	Create a content management system (CMS) like Joomla, Drupal, PHP Nuke etc. Start small. Optional: Allow for the addition of modules/addons.	Web	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Web Board (Forum)	Create a forum for you and your buddies to post, administer and share thoughts and ideas.	Web	Click Here	Click Here
CAPTCHA Maker	Ever see those images with letters a numbers when you signup for a service and then asks you to enter what you see? It keeps web bots from automatically signing up and spamming. Try creating one yourself for online forms.	Web	Click Here	Click Here
Quiz Maker	Make an application which takes various questions from a file, picked randomly, and puts together a quiz for students. Each quiz can be different and then reads a key to grade the quizzes.	Files	Click Here	Click Here
Sort Excel/CSV File Utility	Reads a file of records, sorts them, and then writes them back to the file. Allow the user to choose various sort style and sorting based on a particular field.	Files	Click Here	Click Here
Create Zip File Maker	The user enters various files from different directories and the program zips them up into a zip file. Optional: Apply actual compression to the files. Start with Huffman Algorithm.	Files	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
PDF Generator	An application which can read in a text file, html file or some other file and generates a PDF file out of it. Great for a web based service where the user uploads the file and the program returns a PDF of the file. Optional: Deploy on GAE or Heroku if possible.	Files	Click Here	Click Here
Mp3 Tagger	Modify and add ID3v1 tags to MP3 files. See if you can also add in the album art into the MP3 file's header as well as other ID3v2 tags.	Files	Click Here	Click Here
Code Snippet Manager	Another utility program that allows coders to put in functions, classes or other tidbits to save for use later. Organized by the type of snippet or language the coder can quickly look up code. Optional: For extra practice try adding syntax highlighting based on the language.	Files	Click Here	Click Here
SQL Query Analyzer	A utility application which a user can enter a query and have it run against a local database and look for ways to make it more efficient.	Databases	Click Here	Click Here
Remote SQL Tool	A utility that can execute queries on remote servers from your local computer across the Internet. It should take in a remote host, user name and password, run the query and return the results.	Databases	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Report Generator	Create a utility that generates a report based on some tables in a database. Generates a sales reports based on the order/order details tables or sums up the days current database activity.	Databases	Click Here	Click Here
Event Scheduler and Calendar	Make an application which allows the user to enter a date and time of an event, event notes and then schedule those events on a calendar. The user can then browse the calendar or search the calendar for specific events. Optional: Allow the application to create re-occurrence events that reoccur every day, week, month, year etc.	Databases	Click Here	Click Here
Budget Tracker	Write an application that keeps track of a household's budget. The user can add expenses, income, and recurring costs to find out how much they are saving or losing over a period of time. Optional: Allow the user to specify a date range and see the net flow of money in and out of the house budget for that time period.	Databases	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
TV Show Tracker	Got a favorite show you don't want to miss? Don't have a PVR or want to be able to find the show to then PVR it later? Make an application which can search various online TV Guide sites, locate the shows/times/channels and add them to a database application. The database/website then can send you email reminders that a show is about to start and which channel it will be on.	Databases	Click Here	Click Here
Travel Planner System	Make a system that allows users to put together their own little travel itinerary and keep track of the airline / hotel arrangements, points of interest, budget and schedule.	Databases	Click Here	Click Here
Slide Show	Make an application that shows various pictures in a slide show format. Optional: Try adding various effects like fade in/out, star wipe and window blinds transitions.	Graphics and Multimedia	Click Here	Click Here
Stream Video from Online	Try to create your own online streaming video player.	Graphics and Multimedia	Click Here	Click Here
Mp3 Player	A simple program for playing your favorite music files. Add features you think are missing from your favorite music player.	Graphics and Multimedia	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Watermarking Application	Have some pictures you want copyright protected? Add your own logo or text lightly across the background so that no one can simply steal your graphics off your site. Make a program that will add this watermark to the picture. Optional: Use threading to process multiple images simultaneously.	Graphics and Multimedia	Click Here	Click Here
Turtle Graphics	This is a common project where you create a floor of 20 x 20 squares. Using various commands you tell a turtle to draw a line on the floor. You have move forward, left or right, lift or drop pen etc. Do a search online for "Turtle Graphics" for more information. Optional: Allow the program to read in the list of commands from a file.	Graphics and Multimedia	Click Here	Click Here
GIF Creator	A program that puts together multiple images (PNGs, JPGs, TIFFs) to make a smooth GIF that can be exported. Optional: Make the program convert small video files to GIFs as well.	Graphics and Multimedia	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Caesar cipher	Implement a Caesar cipher, both encoding and decoding. The key is an integer from 1 to 25. This cipher rotates the letters of the alphabet (A to Z). The encoding replaces each letter with the 1st to 25th next letter in the alphabet (wrapping Z to A). So key 2 encrypts "HI" to "JK", but key 20 encrypts "HI" to "BC". This simple "monoalphabetic substitution cipher" provides almost no security, because an attacker who has the encoded message can either use frequency analysis to guess the key, or just try all 25 keys.	Security	Click Here	Click Here
Dodger	Several bad guys fall from the top of the screen, and the user must avoid them. The player can be controlled with the arrow keys or more directly with the mouse. The longer the player lasts without being hit, the higher the score. Variations: Have enemies fall at different rates and be different sizes. Have enemies fall from more than one side of the game. Have power up pickups that grant invulnerability for a while, slow down bad guys, give the player a temporary "reverse bad guys" power, etc.	Games	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Memory Puzzle	A board full of overturned cards. There is a pair for each card. The player flips over two cards. If they match, then they stay overturned. Otherwise they flip back. The player needs to overturn all the cards in the fewest moves to win. Variations: Provide "hints" in the form of four possible matching cards after the player flips the first one. Or, quickly overturn groups of cards at the beginning of the game.	Games	Click Here	Click Here
Sliding Puzzle	A 4x4 board of numbered tiles has one missing space and is randomly set up. To win the game, the player must slide tiles over to put the tiles back in order. Variants: Instead of numbers, you can have a scrambled picture cut up into 4x4 tiles.	Games	Click Here	Click Here
Simon	Four colored buttons light up in a specific pattern. After displaying the pattern, the player must repeat the pattern by clicking the buttons in proper order. The pattern gets longer each time the player completes the pattern. If the player presses a wrong button, the game ends. Variant: A nine-button version can add challenge to this game (but more than that would probably just be tedious.)	Games	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Nibbles	A worm or snake constantly moves around the board. The player controls the direction the "head" of the worm moves, and the worm must try to eat apples that randomly appear. Eating an apply causes the worm to grow in length. The game ends if the worm crashes into the edge of the board or into itself. Variants: Add walls to the level, instead of just a blank rectangle. Add power ups that the worm can pick up. Add bad guys that move around the board that the worm must avoid. Have two worms that the player must control simultaenously. Tron (see below) is a two-player variant of this game.	Games	Click Here	Click Here
Tetris	Shapes made up of four blocks fall from the top of the board. The player must rotate and place them to create full rows with no gaps. When a full row is made, the blocks in that row disappear and the blocks above it move down. The game ends if the board fills up.	Games	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Katamari Damacy	The original Katamari Damacy game was in a 3d world, but a 2d version is also easy to implement. The player controls a small object in a world of different-sized objects. Touching the smaller objects grows the player, touching the larger objects damages or shrinks the player. The player wins when they reach a certain size.	Games	Click Here	Click Here
Sokoban	The player is in a level with objects that need to be pushed over goals. The objects can only be pushed, they can't be pulled. This game does require some effort to design levels for, but Sokoban levels have been designed by others and published on the web. Variant: Add all sorts of level gimmicks: teleport tiles, conveyor belts, buttons that open doors/bridges, buttons that need an object left on them to keep a door open.	Games	Click Here	Click Here
Othello	On a grid, a black and white player places tiles of their color on the board. The opponent's tiles between the newly placed tile and that player's existing tiles are flipped to become the color of the player's tiles. The game ends when the board fills up and the player with the most tiles of their color wins. Variant: Three player Othello with three different colors. Non-square boards.	Games	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Flood It	A grid of six colors of tiles starts off randomly. The player can do a "flood fill" on the top left tile, changing the color of any adjacent tiles of thesame color. The player wins if they are able to make the entire board a single color within a certain number of moves. Variants: Power ups gained when a certain tile is changed.	Games	Click Here	Click Here
Connect Four	Two players of different colors drop their tokens on an upright board. The player to make four tokens in a row, column, or diagonal wins. Creating an AI for this requires a simple minimax algorithm. Variant: Different board sizes. Walls inside the board that appear when the spaces beneath them are filled.	Games	Click Here	Click Here
Bejewled	The board is filled with seven different types of jewels. The player can swap two adjacent jewels to form a three-in-a-row, causing the jewels to disappear and the jewels on top of them to fall down. Creating chain reactions gives bonus points. Variant: Different power ups for matching a particular jewel. Be able to sometimes swap jewels that are not adjacent to each other. Timed games.	Games	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Mancala	A stone capture game where the board is made up of 12 pits and a "score pit" that the player tries to move their stones into. A simple minimax algorithm can be used by the AI.	Games	Click Here	Click Here
Missile Command	Missiles are shot up from the ground to hit falling meteors before they hit cities. The missiles must be timed so that they reach their target at the same time that the meteor is there. Variants: See Rampart below. Different weapon types (the kind used in Scorched Earth) are also possible.	Games	Click Here	Click Here
Arkanoid	The player controls a paddle that bounces a ball off of bricks in the level. The bricks break when the ball bounces off of them. The level is cleared when all the bricks are destroyed. Variants: Power ups fall from smashed blocks, including: triple ball, longer paddle, ball breaks through bricks, a laser shoots out from the paddle.	Games	Click Here	Click Here
Maze	Player runs through a maze to the exit. This is more of an exercise in writing maze-generation algorithms. Variants: Teleports, buttons to control doors, keys to unlock doors, having multiple characters to move around that must work in sync to unblock each other's paths.	Games	Click Here	Click Here

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Reverse a String	Enter a string and the program will reverse it and print it out.	Text	Click Here	
Pig Latin	Pig Latin is a game of alterations played on the English language game. To create the Pig Latin form of an English word the initial consonant sound is transposed to the end of the word and an ay is affixed (Ex.: "banana" would yield anana-bay). Read Wikipedia for more information on rules.	Text	Click Here	
Count Vowels	Enter a string and the program counts the number of vowels in the text. For added complexity have it report a sum of each vowel found.	Text	Click Here	
Check if Palindrome	Checks if the string entered by the user is a palindrome. That is that it reads the same forwards as backwards like “racecar”	Text	Click Here	
Count Words in a String	Counts the number of individual words in a string. For added complexity read these strings in from a text file and generate a summary.	Text	Click Here	
Text Editor	Notepad style application that can open, edit, and save text documents. Add syntax highlighting and other features.	Text	Click Here	
RSS Feed Creator	A program which can read in text from other sources and put it in RSS or Atom news format for syndication.	Text	Click Here	
Post-it Notes Program	A program where you can add text reminders and post them. You can have the program also add popup reminders.	Text	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Quote Tracker (market symbols etc)	A program which can go out and check the current value of stocks for a list of symbols entered by the user. The user can set how often the stocks are checked and the program can show green up and red down arrows to show which direction the stock value has moved.	Text	Click Here	
Guestbook / Journal	A simple application that allows people to add comments or write journal entries. It can allow comments or not and timestamps for all entries. Could also be made into a shout box.	Text	Click Here	
News Ticker and Game Scores	A program which sits on your desktop and aggregates news and game scores from various sources on the net. It then scrolls them across the screen on regular intervals.	Text	Click Here	
Fortune Teller (Horoscope)	A program that checks your horoscope on various astrology sites and puts them together for you each day.	Text	Click Here	
Vigenere / Vernam / Ceasar Ciphers	Functions for encrypting and decrypting data messages. Then send them to a friend.	Text	Click Here	
Random Gift Suggestions	Enter various gifts for certain people when you think of them. When its time to give them a gift (xmas, birthday, anniversary) it will randomly pick one and perhaps places you can get it.	Text	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Text to HTML Generator	Converts text files into web HTML files and stylizes them. Great for making online documentation of standard text documentation.	Text	Click Here	
CD Key Generator	Generates a unique key for your applications to use based on some arbitrary algorithm that you can specify. Great for software developers looking to make shareware that can be activated.	Text	Click Here	
Regex Query Tool	A tool that allows the user to enter a text string and then in a separate control enter a regex pattern. It will run the regular expression against the source text and return any matches or flag errors in the regular expression.	Text	Click Here	
FTP Program	A file transfer program which can transfer files back and forth from a remote web sever.	Networking	Click Here	
Get Atomic Time from Internet Clock	This program will get the true atomic time from an atomic time clock on the Internet. There are various clocks across the world. Do a search for a list of them.	Networking	Click Here	
Chat Application (IRC or MSN style)	Create a chat application that can create simple chat rooms like on Internet Relay Chat (IRC) or a more direct chatting style like MSN. For added complexity, create your own protocol to facilitate this chatting.	Networking	Click Here	
Fetch Current Weather	Get the current weather for a given zip/postal code.	Networking	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
P2P File Sharing App	Create a program like LimeWire, FrostWire, Bearshare, or a torrent style application.	Networking	Click Here	
Port Scanner	Enter an IP address and a port range where the program will then attempt to find open ports on the given computer by connecting to each of them. On any successful connections mark the port as open.	Networking	Click Here	
Mail Checker (POP3 / IMAP)	The user enters various account information include web server and IP, protocol type (POP3 or IMAP) and the application will check for email on several accounts at a given interval.	Networking	Click Here	
Packet Sniffer	A utility program that will read packets coming in and out of the machine along with related information like destination and payload size.	Networking	Click Here	
Country from IP Lookup	Enter an IP address and find the country that IP is registered in.	Networking	Click Here	
Whois Search Tool	Enter an IP or host address and have it look it up through whois and return the results to you.	Networking	Click Here	
Zip/Postal Code Lookup	Enter a zip or postal code and have it return which city/cities that are in that zip code.	Networking	Click Here	
Remote Login	Create a remote desktop style application which can see and control the remote computer (given you have permissions). It may require the use of your own private network and a second computer to test with.	Networking	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Site Checker with Time Scheduling	An application that attempts to connect to a website or server every so many minutes or a given time and check if it is up. If it is down, it will notify you by email or by posting a notice on screen.	Networking	Click Here	
Small Web Server	A simple web server that can serve HTML files that contain Javascript and other forms of non-code executing code. Added complexity would be to try and implement streaming video, create a server-side language, or serve up other stream types.	Networking	Click Here	
Web Bot	An automated program which carries out tasks on the web including checking websites, page scraping, and summarization of data or web posting.	Networking	Click Here	
Product Inventory Project	Create an application which manages an inventory of products. Create a product class which has a price, id, and quantity on hand. Then create an inventory class which keeps track of various products and can sum up the inventory value.	Classes	Click Here	
Movie Store	Manage video rentals and controls when videos are checked out, due to return, overdue fees and for added complexity create a summary of those accounts which are overdue for contact.	Classes	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Airline/Hotel Reservation System	Create a reservation system which books airline seats or hotel rooms. It charges various rates for particular sections of the plane or hotel. Example, first class is going to cost more than coach. Hotel rooms have penthouse suites which cost more. Keep track of when rooms will be available and can be scheduled.	Classes	Click Here	
Student Gradebook Application	Keep track of students (with a student class that has their name, average, and scores) in a class and their grades. Assign their scores on tests and assignments to the students and figure out their average and grade for the class. For added complexity put the students on a bell curve.	Classes	Click Here	
Bank Account Manager	Create a class called “Account” which will be an abstract class for three other classes called “CheckingAccount”, “SavingsAccount” and “BusinessAccount”. Manage credits and debits from these accounts through an ATM style program.	Classes	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Library Catalog	Create a book class with a title, page count, ISBN and whether or not it is checked out or not. Manage a collection of various books and allow the user to check out books or return books. For added complexity generate a report of those books overdue and any fees. Also allow users to put books on reserve.	Classes	Click Here	
Create A Progress Bar for Downloads	Create a progress bar for applications that can keep track of a download in progress. The progress bar will be on a separate thread and will communicate with the main thread using delegates.	Threading	Click Here	
Download Manager	Allow your program to download various files and each one is downloading in the background on a separate thread. The main thread will keep track of the other thread's progress and notify the user when downloads are completed.	Threading	Click Here	
Chat Application (remote styling)	Create a chat application which allows you to connect directly to another computer by their IP through the use of remoting and allow your "server" application handle multiple incoming connections.	Threading	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Bulk Thumbnail Creator	Picture processing can take a bit of time for some transformations. Especially if the image is large. Create an image program which can take hundreds of images and converts them to a specified size in the background thread while you do other things. For added complexity, have one thread handling re-sizing, have another bulk renaming of thumbnails etc.	Threading	Click Here	
WYIWYG Editor	Create an editor online which allows people to move around elements, create tables, write text, set colors etc for web pages without having to know HTML. Think Dreamweaver or FrontPage but for online sites. If you need an example check out the DIC page used to create a post.	Web	Click Here	
Web Browser with Tabs	Create a small web browser that allows you to navigate the web and contains tabs which can be used to navigate to multiple web pages at once. For simplicity don't worry about executing Javascript or other client side code.	Web	Click Here	
Page Scraper	Create an application which connects to a site and pulls out all links, or images, and saves them to a list. For added complexity, organize the indexed content and don't allow duplicates. Have it put the results into an easily searchable index file.	Web	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
File Downloader	An application which can download various objects on a page including video streams or all files on a page. Great for pages with a lot of download links.	Web	Click Here	
Telnet Application	Create an application which can telnet into servers across the internet and run basic commands.	Web	Click Here	
Online White Board	Create an application which allows you and friends to collaborate on a white board online. Draw pictures, write notes and use various colors to flesh out ideas for projects. For added complexity try building in picture tubes.	Web	Click Here	
Bandwidth Monitor	A small utility program that tracks how much data you have uploaded and downloaded from the net during the course of your current online session. See if you can find out what periods of the day you use more and less and generate a report or graph that shows it.	Web	Click Here	
Bookmark Collector and Sorter	An application that you can put online for people to upload bookmarks to, have it sort them, remove duplicates and export the entire list as a Firefox/IE/Safari bookmark file. For added complexity see if you can group the bookmark items into various folders.	Web	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Password Safe	A program which keeps track of passwords for sites or applications and encrypts them with a key so that no one can read them.	Web	Click Here	
Media Player widget for iGoogle	Create an iGoogle gadget which can play various song lists from your computer as well as share one song daily. Perhaps let people look up which songs you have listened to lately.	Web	Click Here	
Text-base Game Like Utopia	Create a simple text based RPG like Utopia where you can create a civilization, gather resources, forge alliances, cast spells and more on a turn based system. See if you can dominate the kingdom.	Web	Click Here	
Scheduled Auto Login and Action	Make an application which logs into a given site on a schedule and invokes a certain action and then logs out. This can be useful for checking web mail, posting regular content, or getting info for other applications and saving it to your computer.	Web	Click Here	
E-card Generator	Make a site that allows people to generate their own little e-cards and send them to other people. Can use flash or not. Use a picture library and perhaps insightful mottos or quotes.	Web	Click Here	
Content Management System	Create a content management system (CMS) like Joomla, Drupal, PHP Nuke etc. Start small and allow for the addition of modules/addons later.	Web	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Template Maker	Make a site or application which allows the user to enter in various color codes, elements, dimensions and constructs a template file for a particular application like PHPBB, Invision Board, MySpace, Bebo, etc.	Web	Click Here	
CAPTCHA Maker	Ever see those images with letters a numbers when you signup for a service and then asks you to enter what you see? It keeps web bots from automatically signing up and spamming. Try creating one yourself for online forms. If you use PHP, take a look at the image functions of GD.	Web	Click Here	
Quiz Maker	Make an application which takes various questions form a file, picked randomly, and puts together a quiz for students. Each quiz can be different and then reads a key to grade the quizzes.	Files	Click Here	
Quick Launcher	A utility program that allows the user to assign various programs to icons on a toolbar. Then by clicking the buttons they can quickly launch the programs with parameters etc. Much like Windows quick launch.	Files	Click Here	
File Explorer	Create your own windows explorer program but with added features, better searching, new icons and other views.	Files	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Sort File Records Utility	Reads a file of records, sorts them, and then writes them back to the file. Allow the user to choose various sort style and sorting based on a particular field.	Files	Click Here	
Add Transactions in File and Find Average	Read in a file of financial transactions, group them into accounts, add up fields or find averages or apply credits and debits to each account.	Files	Click Here	
Create ZIP File Maker	The user enters various files from different directories and maybe even another computer on the network and the program transfers them and zips them up into a zip file. For added complexity, apply actual compression to the files.	Files	Click Here	
PDF Generator	An application which can read in a text file, html file or some other file and generates a PDF file out of it. Great for a web based service where the user uploads the file and the program returns a PDF of the file.	Files	Click Here	
Bulk Renamer and Organizer	This program will take a series of files and renames them with a specific filename filter entered by the user. For instance if the user enters myimage###.jpg it will rename all files with a “minimum” of three numbers like “myimage001.jpg”, “myimage145.jpg” or even “myimage1987.jpg” since 1987 has at least three numbers.	Files	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
MP3 Tagger	Modify and add ID3v1 tags to MP3 files. See if you can also add in the album art into the MP3 file's header as well as other ID3v2 tags.	Files	Click Here	
Log File Maker	Make an application which logs various statistics in response to given events. This can be something that logs what an application does, what the system is doing, when something like a file changes etc.	Files	Click Here	
Excel Spreadsheet Exporter	Create an online application which can read in a file and create an Excel Spreadsheet to export back. This can be through CVS or other file formats. For added complexity, see if you can create formula fields as well.	Files	Click Here	
RPG Character Stat Creator	Make a program which will randomly create a character's stats based on several rules set forth by the user. Have it generate a class, gender, strength/magic/dexterity points, and extra abilities or trades. Have it save it to a file which can then be printed out by a dungeon master.	Files	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Image Map Generator	Image maps are those images on the web that have multiple hover points that link to different pages. Such images may include maps or splash pages. See if you can make one where the user specifies an image, clicks hotspots in the image and specify links. It will then generate the HTML code to a file that the user can then copy and paste into their website to make the image map.	Files	Click Here	
File Copy Utility	Create a utility that can do bulk file copying and backups of other files.	Files	Click Here	
Code Snippet Manager	Another utility program that allows coders to put in functions, classes or other tidbits to save for use later. Organized by the type of snippet or language the coder can quickly look up code. For extra practice try adding syntax highlighting based on the language.	Files	Click Here	
Versioning Manager	Create your own versioning system for code files. Users are forced to check out items and lock items during reading and writing so that a group of programmers are not accidentally overwriting code files on one another.	Files	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
SQL Query Analyzer	A utility application which a user can enter a query and have it run against a local database and look for ways to make it more efficient.	Databases	Click Here	
Remote SQL Tool	A utility that can execute queries on remote servers from your local computer across the Internet. It should take in a remote host, user name and password, run the query and return the results.	Databases	Click Here	
Baseball/Other Card Collector	Create an online application for keeping track of a collection of cards. Let the user enter all cards in a set, check off which ones they have, which ones they need and generate lists of cards they are looking for. For extra complexity, have it sum up sets and generate reports on how close they are of completing sets or the current value of a set.	Databases	Click Here	
Report Generator	Create a utility that generates a report based on some tables in a database. Generates a sales reports based on the order/order details tables or sums up the days current database activity.	Databases	Click Here	
Database Backup Script Maker	A program which reads a database's objects, relationships, records and stored procedures and creates a .sql file which can then be imported into another database or kept as a backup file to rebuild the database with.	Databases	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Event Scheduler and Calendar	Make an application which allows the user to enter a date and time of an event, event notes and then schedule those events on a calendar. The user can then browse the calendar or search the calendar for specific events. For added complexity, allow the application to create reoccurrence events that reoccur every day, week, month, year etc.	Databases	Click Here	
Budget Tracker	Write an application that keeps track of a household's budget. The user can add expenses, income, and recurring costs to find out how much they are saving or losing over a period of time. For added complexity allow the user to specify a date range and see the net flow of money in and out of the house budget for that time period.	Databases	Click Here	
Address Book	Keep track of various contacts, their numbers, emails and little notes about them like a Rolodex in the database. For extra complexity, allow the user to connect to a website publish their address book based on specific options the user has set.	Databases	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
TV Show Tracker	Got a favorite show you don't want to miss? Don't have a PVR or want to be able to find the show to then PVR it later? Make an application which can search various online TV Guide sites, locate the shows/times/channels and add them to a database application. The database/website then can send you email reminders that a show is about to start and which channel it will be on.	Databases	Click Here	
Travel Planner System	Make a system that allows users to put together their own little travel itinerary and keep track of the airline / hotel arrangements, points of interest, budget and schedule.	Databases	Click Here	
Entity Relationship Diagram (ERD) Creator	A program that allows the user to put together ERD diagram and save it or have it generate some basic SQL syntax to give them a jump start.	Databases	Click Here	
Database Translation (MySQL <-> SQL Se	A simple utility that reads in from one database and constructs SQL compliant with another database. Then saves that to another database. One popular transition would be to and from MySQL server for databases like SQL Server and Oracle.	Databases	Click Here	
Web Forum	Create a forum for you and your buddies to post, administer and share thoughts and ideas.	Databases	Click Here	

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Slide Show	Make an application that shows various pictures in a slide show format. For extra complexity try adding various effects like fade in/out, star wipe and window blinds transitions.	Graphics and Multimedia	Click Here	
Mindmapper	Allow the user to put down ideas and quickly brainstorm how they are related into a mind map. The goal here is speed so let the user quickly write in an idea and drag it around in a visual map to show relationships.	Graphics and Multimedia	Click Here	
Import Picture and Save as Grayscale	A utility that sucks the color right out of an image and saves it. You could add more including adjusting contrast, colorizing and more for added complexity.	Graphics and Multimedia	Click Here	
Stream Video from Online	Try to create your own online streaming video player.	Graphics and Multimedia	Click Here	
MP3 Player and other formats	A simple program for playing your favorite music files. For extra complexity see if you can add in playlists and an equalizer.	Graphics and Multimedia	Click Here	
Bulk Picture Manipulator	This program will take in a directory of pictures and apply a certain effect to them whether it be reducing color count, changing its format, or alter file attributes. For something extra try to see if you can also create a system to tag them.	Graphics and Multimedia	Click Here	
CD Burning App	Create a utility that simply burns data to a CD.	Graphics and Multimedia	Click Here	

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YouTube Downloader	A program which can download videos to your hard drive from youtube.com. Save the files in various formats including FLV and AVI.	Graphics and Multimedia	Click Here	
Wallpaper Manager	Make a program which keeps track of your favorite wallpapers, changes them regularly and maybe even re-sizes them for your resolution (aka tiles one and stretches another)	Graphics and Multimedia	Click Here	
Screen Capture Program	Make a utility that will simply capture a frame from your web cam. For added complexity see if you can also build in emailing functionality.	Graphics and Multimedia	Click Here	
Image Browser	This application is used to view various image files on your computer from PNG, GIF, JPG to BMP, TIFF etc.	Graphics and Multimedia	Click Here	
Traffic Light Application	See if you can make your own street light application and then put it into an intersection scenario. Don't let any cars run the lights and crash into one another!	Graphics and Multimedia	Click Here	
MP3 to WAV Converter	MP3 is essentially compressed wav format. See if you can translate it back into wav so that some other sound editing programs can work with the wav file itself. Keep in mind that 1 MB of MP3 is relative 10MB wav.	Graphics and Multimedia	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Signature Maker	Ever seen those web board posts where someone has a generated signature made up? See if you can make a program that allows the user to specify a background, text, colors and alignment to make their own signatures or userbars.	Graphics and Multimedia	Click Here	
Screensaver Maker	Make a screensaver program that will run while your computer sits idle. To make a simple one use some standard pictures and then for added complexity try a 3D object that spins around the screen and bounces off the sides.	Graphics and Multimedia	Click Here	
Watermarking Application	Have some pictures you want copyright protected? Add your own logo or text lightly across the background so that no one can simply steal your graphics off your site. Make a program that will add this watermark to the picture.	Graphics and Multimedia	Click Here	
Turtle Graphics	This is a common project where you create a floor of 20 x 20 squares. Using various commands you tell a turtle to draw a line on the floor. You have move forward, left or right, lift or drop pen etc. For added complexity, allow the program to read in the list of commands from a file. Do a search online for “Turtle Graphics” for more information.	Graphics and Multimedia	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Battleship	Create two game boards and let each player place a number of war ships. Each player can't see the other person's board. They then take turns firing at one another by guessing one of the board squares. If the square they guess contains part of a ship, it is a hit. Otherwise it is a miss. They sink a ship when all squares containing that particular ship have been uncovered. The player wins when all their opponents' ships have been sunk.	Games	Click Here	
Chess and Checkers	Simply put a game of chess or checkers. Try to make it playable online and if you can use a graphical user interface that can also undo or redo a step as well as keep a history of moves for replay.	Games	Click Here	
Hangman	Randomly select a word from a file, have the user guess characters in the word. For each character they guess that is not in the word, have it draw another part of a man hanging in a noose. If the picture is completed before they guess all the characters, they lose.	Games	Click Here	
Crossword Puzzle	Create a crossword puzzle which links words together on common letters. Provide a list of clues for each word and let the user enter fill in the words until the entire crossword is filled in.	Games	Click Here	

Project Name	Project Description	Category	Link to Project Description	Link to Project Solution
Frogger	Get your frog across the river and lanes of traffic by either jumping on logs and lily pads rushing by at different speeds or avoid the automobiles which are also moving at various speeds. Based on the old arcade game.	Games	Click Here	
http://www.linuxtrainingacademy.com				