## **Online Judges And Tutorial Sites**

# http://online-judge.uva.es/ and http://cii-judge.baylor.edu/

University of Valladolid 24-hour Online Judge and Offical ACM/ ICPC Live archive contains all problems of ACM Regionals.

# http://acm.timus.ru/

24-hour Online Judge hosted by Ural State University of Russia. This site contain the problems from many Russian contest. This can be very useful site for students to practice. From this site we can understand how these Russian Problems differ from non-Russian problems.

## http://plg.uwaterloo.ca/~acm00/

This is the contest page of University of Waterloo. This university currently leads the contest arena of the World. They arrange programming contest almost in every alternate term and problems of these contest set standard for many other universities.

# http://oldweb.uwp.edu/academic/mathematics/usaco/ and http://ace.delos.com/

Online training site for contests which guides beginners with a step by step problem solution.

# http://www.acmsolver.org/

Another training site for 24-hour online programming contest developed by "Ahmed Shamsul Arefin" mainly for novice programmers now linked with world's major online judges.

### http://www.acm.inf.ethz.ch/ProblemSetArchive.html

This site is the best resource for the past ACM Regionals and World Finals problem set. It has also solutions and judge data for many contests, which will help us for practice.

## http://acm.uva.es/problemset/replies.html

This page contains the information about the meaning of different judge replies. This is also a link page of the site acm.uva.es.

## http://contest.uvarov.ru/

This is the POTM master's home page. POTM Contest means Programmer of the Month Contest. The problem set of this contest is different then the conventional programming contest. The organizer gives more stress on Optimization than number of solution.

## http://www.acmbeginner.tk

Is it very difficult to disclose oneself as a good programmer? To solve the problems, the difficulty that you face in the 24-hour online judge and the help and guideline that found to overcome them is integrated in this site "ACMBEGINNER" by M H Rasel.

http://groups.yahoo.com/group/icpc-l http://groups.yahoo.com/group/acm\_solver

You talk about algorithms, data structures and mathematical concepts. The group is made for teams, ex-teams and everybody interested in on-line programming. Coaches and teachers are very welcome.

### Site of Pioneers!

## Newcomers advice, by Shahriar Manzoor

One of the greatest programmer/ problemsetter of acm.uva.es as well as a renowned progeammer of Bangladesh, advices the newcomers. He is now the judge of UVa OJ site and WF. He is also the elite panel problem setter of the site acm.uva.es. you can visit his publication by the using the URL <a href="http://www.acm.org/crossroads/xrds7-5/">http://www.acm.org/crossroads/xrds7-5/</a>

### World of Steven, by Steven Halim

Steven Halim published his site for the problem solvers including the problemset tricks tutorials with the difficulty level. In his site he has also categorized problems. This site contains almost all hints of the problems that he has solved. You can visit the site using the link http://www.comp.nus.edu.sg/~stevenha/programming/acmoj.html

### Reuber Guerra Duarte

Reuber Guerra Duarte developed this site with some solutions (the real source code) for some problems that already solved by him. Please don't directly send his solutions to judge. http://www.dcc.ufmg.br/~reuber/solutions/index.html

## Ed's Programming Contest Problem Archive by Ed-Karrels

Ed-karrel one of the greatest problem setter publish this site with the solutions to many problems. visit the site with the URL <a href="http://www.karrels.org/Ed/ACM/prob">http://www.karrels.org/Ed/ACM/prob</a> index.html

# **Mark Dettinger**

A living legend of programming contest. He was a main contest architect of the University of ULM, Germany. Now this responsibility lies on another person Water Guttman. If you visit the site you will find many useful link as well as many interesting incidents of his life and onmoces again you will realize again that the boy gets eleven in math out of hundred can also be genius. URL <a href="http://www.informatik.uni-ulm.de/pm/mitarbeiter/mark/">http://www.informatik.uni-ulm.de/pm/mitarbeiter/mark/</a>

#### **Books**

# Introduction to Algorithm (CLR)

Introduction to Algorithms (MIT Electrical Engineering and Computer Science Series) by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest. Now they already publish the 2nd Edition + Stein as the 4th author. This book is a-must-have to be a good programmer.

### **Algorithm Design Manual**

The Algorithm Design Manual by Steven S. Skiena (+ book website). Also a-must-have for every good programmer.

# The Art of Computer Programming

The Art of Computer Programming, Volumes 1-3 Boxed Set by Donald E. Knuth. Hard to understand for beginner but worth to read

### **Concrete Mathematics**

Concrete Mathematics, Second Edition + by Ronald L. Graham, Donald E. Knuth, Oren Patashinik. This book contain mathematical problem and solutions, but This is very hard to understand. Though it is hard, it is very useful for programming contest. Several formulation techniques discussed here.

## **Number Theory**

Number Theory by S G Telang is a book, consists of lot of knowledge about the number theory. It is better idea to read this book before reading the book Concrete Mathematics. This is easy to understand.

## **Discrete Mathematics And Its Application**

Discrete Mathematics And Its Application by Kenneth H. Rosen consists of a lot of practical help on integer matrices, mathematical reasoning, counting, graph tree problems.

# Data Structure Using C and C++

Data structure using C and C++ by ,Yedidyah Langsam, Moshe J. Augenstein Aaron M. Tenenbaum. Second Edition. This book contains basic problem related to Data Structures with C coding.

# **Programming Challenges**

Programming Challenges, by Steven Skiena Miguel Revilla. We dont want to say anything about this two legend. All the programmers are familiar with this two ultimate Programming Contest Legends. Use this book to learn what to do for the programming contest.

### **Art of Programming Contest**

Well, Art of Programming Contest is this one, by Ahmed Shamsul Arefin.

## **Programming Language Guides**

## http://www.sgi.com/tech/stl/

In this site you will find the STL documentation. The STL is very important for programming. It is efficient and make code simple and sort. To use this the C++ template knowledge is necessary. The beginner can overlook the STL at beginning but is is needed in future.

# www.cplusplus.com / www.cprogramming.com

Great sites for the C/C++ programmers. These sites contains documents, References, sources codes with electronic forum where you can consult with great programmers.

### **Mathematics Site**

## mathworld.wolfram.com

MathWorld is a comprehensive and interactive mathematics encyclopedia intended for students, educators, math enthusiasts, and researchers. Like the vibrant and constantly evolving discipline of mathematics, this site is continuously updated to include new material and incorporate new discoveries.

## http://mathforum.org/

The Math Forum is a leading center for mathematics and mathematics education on the Internet. Its mission is to provide resources, materials, activities, person-to-person interactions, and educational products and services that enrich and support teaching and learning in an increasingly technological world.

# http://www.math.com/

Math.com is dedicated to providing revolutionary ways for students, parents, teachers, and everyone to learn math. Combining educationally sound principles with proprietary technology, Math.com offers a unique experience that quickly guides the user to the solutions they need and the products they want.

## http://www.math-net.org/

Math-Net intends to coordinate the electronic information and communication activities of the global mathematical community with the aim to enhance the free-flow of information within the community.

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INDEX 249

# **INDEX**

ADHOC problems, 16 Hash Table variations, 116 Adjacency List, 139 Infix to Postfix conversion, 100 Adjacency Matrix, 139 Informed Search, 154 Algorithm, 19 Integer to any base, 197 Array, 74 Josephus Problem, 200 Base Number Conversion, 91 Judges, 26 Bellman-Ford Algorithm, 164 Kruskal's algorithm, 161 LCM, 191 Big Integer, 92 Big Mod, 91, 195 LCS, 205 Binary Search, 113 Linear-time Sorting, 111 Binary Search Tree, 113 Linked List, 76 Breadth-first search, 144 Longest Common Subsequence, 125 BRUTE FORCE METHOD, 85 Longest Inc/Dec-reasing Subsequence (LIS/LDS), Bubble Sort, 107 Carmichael Number, 93 Lowest Common Multiple (LCM), 99 Collision Handling, 115 Matrix Chain Multiplication, 123 Combinations, 202 Matrix Chain Multiplication Problem, 123 COMPILATION ERROR (CE), 15 Maximum Interval Sum, 132 Connected Fields, 158 MCM, 209 Connectedness, 141 MiniMax Distance, 167 Convex Hull, 173 Minimum spanning trees, 160 Counting Change, 131 Minimum Spanning Trees, 159 Counting Combinations, 94 Multiple input programs, 83 Counting Sort, 111 Number Conversions, 196 DATA STRUCTRURES, 72 optimal sub-structure, 124 debugging, 15 Optimizing, 89 Decimal To Roman, 198 order of growth, 22 Decomposition, 89 Other Dynamic Programming Algorithms, 133 Depth First with Iterative Deepening, 150  $PC^{2}$ , 235 Depth-first search, 147 Postfix Calculator, 100 Dictionary, 114 Pre-Computation, 89 Dijkstra Algorithm, 163 Prime Factors, 101 Directed Acyclic Graph, 165 Prime Numbers, 102 Directed Graph, 137 prime testing, 102 Divide and Conquer, 88 Prim's algorithm, 162 Divisors and Divisibility, 95 Queue, 79 DYNAMIC PROGRAMMING, 121 Quick Sort, 108 Radix Sort, 111 Earth coordinate system, 172 Edge List, 138 Recursion, 86 Edit Distance, 127 SEARCHING, 113 Euclid's Algorithm, 190 Sieve of Eratosthenes, 105 Euler Cycle, 170 SORTING, 106 Euler Path, 170 sorting algorithms, 106 Exponentiation, 96 Stack, 78 Factorial, 97 STL, 231 Strongly Connected Components, 171 Fermat Algorithm, 104 Fermat Little Test:, 104 Subgraphs, 142 Fibonacci, 97 Symmetries, 90 Floyd Warshall, 165 Topological Sort, 119, 171 GCD, 191 Transitive Hull, 166 Graph Transpose, 170 Uninformed Search, 143 GRAPHS, 134 Valladolid OJ, 16 Greatest Common Divisor (GCD), 99 Variations on Binary Trees, 114

Zero-One Knapsack, 130

GREEDY ALGORITHMS, 117