Outline for May 17, 2002

Handouts: *none*
Reading: Johnsonbaugh and Kalin, pp. 390–435, 679–702 (appendix of useful functions)

1. Greetings and felicitations!
2. Other Types
   a. bit fields
   b. unions
   c. enumerated types
3. Libraries
   a. compiling with libraries
   b. common libraries: stdio, ctype
4. Standard I/O Library (#include <stdio.h>)
   a. open file: fopen
   b. unstructured read/write: getchar, fgetc (getc), putchar, fputc (putc)
   c. formatted read/write: fgets (gets), fscanf, fputs (puts), fprintf
   d. structured read/write: fread, fwrite
   e. random access: fseek, ftell, rewind
   f. close file: fclose
   g. miscellaneous: feof, ferror, clearerr
5. Character types and conversions (#include <ctype.h>)
   a. alphabetics, numerics, alphanumerics: isalnum, ialdigit, isxdigit, isalpha
   b. ypper, lower, and conversions: isupper, islower, toupper, tolower
   c. types of chars: iscntrl, isgraph (not blank, printable), isprint (printable), ispunct, isspace
6. String conversion (#include <stdlib.h>)
   a. string to number: atoi, atof, atol
7. String functions (#include <string.h>)
   a. compare: strcmp, strncmp, strcasecmp, strncasecmp; memcmp
   b. copy: strcpy, strncpy; memcpy (no overlap), memmove (overlap okay)
   c. find character: strchr (index), strrchr (rindex), strpbrk; memchr
   d. length: strlen
8. Memory management (#include <stdlib.h>
   a. Allocation: malloc, calloc
   b. Release: free, cfree (deprecated)
   c. Reallocation: realloc()
9. Miscellaneous
   a. terminate program (exit); include <stdlib.h>
   b. sort array of data (qsort); include <stdlib.h>
   c. time of day (time, ctime); include <time.h>
   d. execute cvommand (system); include <stdlib.h>