IC221 System Programming
Spring 2016
HW6

NAME:_____

COLLABORATOR(S):_____

50 POINTS

5/3/1/0 1. What value does **fopen()** return if the file does not exist?

2. Match the file open mode to the description:

10/8/4/0

r	___	(a) Open file for writing, create the file if it doesn't exist or tructate it if it does
r+	___	(b) Open the file for reading and writing, reading occurs at the start of the file, writing occurs at the end of the file
w	___	(c) Open the file for writing and reading, create the file if it doesn't exist or truncate it if it does
a+	___	(d) Open file reading reading and writing, do **not** create the file if it doesn't exist and do **not** truncate it if it does.
w+	___	(e)Open the file reading, do **not** create the file if it doesn't exist and do **not** truncate it if it does.

10/8/4/0

3. Label all the things wrong with this program below and describe to the right: (**hint: Don't forget about error checking)**

```
#include <stdlib.h>

int main( int argc, char * argv[]){

  file * stream;

  stream = open("file.txt", "r");

  fprintf(stream, "Hello World");

  return 0;
}
```

a

b

c

NAME: _____

4. Write the corrected code from question 3:

5/3/1/0

5. Consider the type below, fill in the **fwrite()** statement to write that type to a file:

```
typedef struct{
  long acctnum;
  double bal;
  char acctname[1024];
} acct_t;

int main(int argc, char *argv[]){

  acct_t acc;
  acct.accnum=123456789011;
  bal=1000000000000; //I'm rich!
  strcpy(acctname, "Adam Aviv");

  FILE * out = open("acct.dat", "w");

  fwrite(                                                    );

 fclose(out);
}
```

10/8/4/0

6. Consider a file, **accts.dat**, which stores 1000 accounts formatted like above. Complete the **fread()** command to read all those accounts in:

```
int main(int argc, char * argv[]){

  acc_t accts[1000];

  FILE * in = open("accts.dat","r");

  fread(                                                     );

  int i;
  for(i=0;i<1000;i++){
    printf("%l (%f) --  %s\n", accts[i].acctnum,
                               accts[i].bal,
                               accts[i].acctname);
  }

  fclose(in);
}
```

10/8/4/0