

CS 12 - Assignment 6

Due Wednesday, June 11

You will be writing a program to maintain the jail system. The implementation of this program has been left up to you to decide. The following is what the program must contain.

- Keep information about the particular jail you are assigned to maintain. This should include the name and address of the jail, the maximum number of inmates it can hold, and the number of inmates present in the jail.
- For each inmate you should keep their name, crime, the year they entered the jail, and their sentence (the number of years they must serve).
- You should be able to print the jail information (name, address, and number of inmates).
- All inmates, and their information, should be able to be shown.
- Determine whether or not you can let another inmate enter the jail. Do not overcrowd the jail.
- If the jail is full, you should be able to determine when is the earliest year that a new inmate can enter the jail (when another inmate is released).
- Book an inmate into the jail, enter all their information.
- Let an inmate out on parole (remove them from the jail).
- Print the information of a specific inmate based on their name.
- Determine the number of inmates that entered the prison in a particular year.
- Determine the number of inmates present in the jail that will still be present during a particular year.
- Print out all the inmates and their information that have committed a specified crime.

EXTRA CREDIT

- Store the information into a file when the program exits and read it back in when the program begins.
- You will also receive extra credit for any other reasonable and relative functions that you add to this program.

You will be graded not only for the workability of this program but also based on the efficiency and style of your programming. For example, given that two people's programs both work correctly, the one who writes the program such that no space is wasted will receive more points than the one who uses set amounts of space. Another way to increase the amount of points you receive is to use the programming constructs that have been discussed in class (classes, inheritance, overloading, virtual functions, lists...). However, these must be used well, do not try and just throw them in randomly to receive more points.

Your program must be written in separate files. You must include a makefile when you turn your program in. Be sure to turn your program into the correct section number.

No late assignments will be accepted.