

```

.TH Project 2 - Memory Management & Layering
.SH NAME
Jesse Maki

.SH FILES
.B MemoryManager.h
.RS 3
File Creation
.RS 3
Prototypes and libraries for methods and objects that I used in the memory
management

.RE .RE
.B MemoryManager.cpp
.RS 3
File Creation
.RS 3
Implemented MemoryManager class to the specifications of the structured in
the PDF.

.B MemoryManager Constructor/Destructor
.RS 3
Sets the wordSize for alignment and default allocator to find memory
holes. The destructor clears releases all memory allocated by this object
without leaking memory.

.RE .RE
.B initialize
.RS 3
Instantiates block of requested size, no larger than 65536 words; cleans
up previous block if applicable

.RE .RE
.B shutdown
.RS 3
Clears vectors, deletes initial char[], resets the size and memory limit.

.RE .RE
.B allocate
.RS 3
Allocates a memory using the allocator function. If no memory is available
or size is invalid, returns nullptr.

.RE .RE
.B free
.RS 3
Frees the memory block within the memory manager so that it can be reused

.RE .RE
.B setAllocator
.RS 3
Setter function

.RE .RE

```

```
.B dumpMemoryMap
.RS 3
Uses standard POSIX calls to write hole list to filename as text,
returning -1 on error and 0 if successful.

.RE .RE
.B getWordSize/getMemoryStart/getMemoryLimit/getList/getBitMap
.RS 3
Get functions

.RE .RE
.B bestFit
.RS 3
Returns word offset of hole selected by the best fit memory allocation
algorithm, and -1 if there is no fit

.RE .RE
.B worstFit
.RS 3
Returns word offset of hole selected by the worst fit memory allocation
algorithm, and -1 if there is no fit.

.SH TESTING
.B I used the CommandLineTest.cpp for my testing.

.SH BUGS
.B

.SH LINK
.B unlisted video -

can be located at https://youtu.be/jyXCVpNyqn0

.SH REFERENCES
1-https://www.geeksforgeeks.org/posix-shared-memory-api/
2-https://www.cs.rit.edu/~ark/lectures/gc/03\_00\_00.html
```