Assessment Brief for Programming in C

ADTs: Binary Sparse Arrays (BSA)

Unit name	Programming in C
Unit code	COMSM1201
Assessment number	5 (4th fully marked assessment)
Assessment name	ADTs : Binary Sparse Array (BSA)
Assessment prepared by	Neill Campbell
Assessment type	Coursework
Credit value	**25%** of 30cp unit
Expected time to complete	Around 1 week, very approximately.
Submission format	Via Blackboard – **one** .zip file. You can submit as often as you like, old files are automatically overwritten. I'll only mark your latest submission. Any submissions that are late (even by 1 second) are automatically given a late penalty; my feedback will not show this. Penalties are enforced by our systems not me!
Deadline	8th December 2022 (Friday afternoon, Week 11 @ **13:00**)
Deliverable	Only one file : 1) A **single** file entitled bsa*.zip.* Inside the .zip file, give me (at least) *Alloc/alloc.c* and *Alloc/specific.h*. I'll use my *Makefile* to compile your code. Ensure the Makefile I have provided works correctly using the other files I provide. 2) Make sure these filenames are spelled correctly and have been compiled in a terminal on a lab machine without warnings using the full set of warning flags.
Learning outcomes being assessed	• To be able to write a program, given a brief specification that compiles and executes correctly. • To be able to convert a simple algorithm into working code. • The ability to program in the C99 C standard, and in the style outlined in the house-style guidelines. • How to utilise, amongst others: 2D arrays, structures and pointers. • To understand ADT interfaces and how to compile against a given interface & driver file. • To be able to perform adittional checking using the sanitizer. • To be able to build a program from a suite of small, well tested functions. • To be able to debug simple programs on your own.
Assessment criteria	Conformance to the house-style guidelines, assert testing, short readable functions.
Additional resources	"Live" Q&A sessions, week 9 (ADTs) / 10 (Trees) exercises.
Support for this assignment	6 hours of labs in week 11.
Additional advice to students	Use house-style guidelines. DO NOT wait until the end to do testing – it will be obvious and have had no impact on the style of the program. **If your code doesn't work, also submit a README.txt file, and submit it anyway – your style/structure is still worth marks.**
Feedback mode/method	Brief written feedback from Neill, and, additionally, at any time verbally during lab sessions.
Planned feedback date	ASAP after Christmas, hopefully in time before the final assignment submission.
Useful previous feedback	8Queens
Future feedback use	Next assignment