

1. (4 marks) Discuss the four steps of compiling using gcc and give the corresponding gcc options. (You need to specify what the four steps do.)

- preprocessing - text substitution
- compilation - turn c code into assembly language
- assembly - turn human code to machine code
- linking - combine all the files together

2. (3 marks) Discuss the major differences between Java and C.

Java does not use pointers

Java uses garbage collection to free memory

Java runs on a virtual machine enabling the same byte code to run on different operating systems.

Java forces the object oriented model for software

C uses standalone functions rather than methods in classes