What is z/OS Job Control Language (JCL)?

Those new to z/OS are sometimes confused about the role of JCL, so before answering the question "What is z/OS JCL?" it is worth saying what it is not. It is not a scripting language. There is no iterative processing available, and decision making is limited. The text that the coder writes is interpreted and converted into internal format prior to being placed on the execution queue. Symbolic parameters are resolved as part of that conversion/interpretation processes. As the job executes the JCL for each step is processed sequentially starting with the first, requested step and proceeding towards the last step. Decision making is limited to the omission of a step or steps, there is no GOBACK.

z/OS JCL is a resource allocation language. The principle resources it provides access too are Storage, Processor and Peripherals (the I/O sub-system.)

It controls Storage access via the REGION and MEMLIMIT parameter on either the JOB or EXEC statements. The values on these statements can be overridden outside of the coder's control. Similarly Processor access is controlled via the TIME parameter on either the JOB or EXEC statement but again these can be limited by system settings. Finally Peripherals access, being associated with files or data sets is controlled by DD statements.

The z/OS Job Control Language Reference manual is logically the bible, but it covers the gamut of possibilities supported by the system, and only a subset may be eligible at any given installation. Consult the IBM manual for the syntax of any parameter, but consult installation standards to determine what is allowable on your system. (Installation standards may be a formal document, or they may simply be undocumented de facto conventions, i.e. it has always been done this way.)

Note that JES initialization parameters can establish defaults, and in some cases limits for various parameters. There are a number of exit points, within JES, z/OS, TSO/E and SMF where installation written code can be used to modify values. Finally it is worth considering whether the security product is being used to restrict access to specific job classes. Any or all of the above could be used to enforce standards.