

Your submission for this assignment **must include your full name** and your nine-digit **student number as a comment** at the top of the **source file you submit**. All source code files must be written using the **Python 3 programming language** and must run on the course's **official virtual machine**.

Submissions that crash (i.e., terminate with an error) on execution will **receive a mark of 0**.

Officially, the Due Date for this Assignment is:
Friday, October 15th, 2021, at 11:59pm EST.

Late Submissions are **Accepted Without Penalty Until Sunday, October 17th, by 11:59pm EST**.
Submissions received after that will not be accepted and will receive a mark of 0.

The term "expert system" can refer to a computer program that is capable of decision making and can be used for diagnostics and classification. Furthermore, since the underlying knowledge used by the system is typically provided by a human expert, a rudimentary expert system is a relatively simple project. For this assignment, you will practice with branching control structures by creating your own expert system that uses user input to "guess" film titles.

As a clarifying example, the partial transcript such an expert system might follow for the subgenre of "Animated Christmas Special" could be as follows (with user input in red):

```
Was the film based on a story by Dr. Seuss? no
Does the film use stop-motion animation? yes
"Rudolph the Red-Nosed Reindeer (1964)" is the film title.
```

In order to complete this task, you will need to:

- choose two movie "subgenres" from <http://www.filmsite.org/subgenres2.html>¹
- choose at least ten movies for each of your two subgenres (i.e., at least twenty movies total)
- devise a set of "yes-or-no" questions to identify movies (without directly referencing titles)²
- create a flowchart of what questions you intend to ask and in what order³

Your submission for this assignment:

- must be a source code file with filename **'comp1405_f21_#####_assignment_04.py'**
- must first ask the user if they require instructions (and provide some if the answer is "yes")
- must then ask the user which of the two subgenre expert systems they would like to consult
- must then ask the user "yes-or-no" questions (without asking questions unnecessarily)
- must include (as comments) a list of distinguishing elements for each of your selected movies⁴
- can assume that the user will always enter valid input when prompted

¹ To clarify, you must select subgenres (e.g., "spaghetti western", "alien invasion", etc.), not main genres (e.g., "action").

² To clarify, the question "Are you thinking of the 2000 film 'How the Grinch Stole Christmas?'" is NOT acceptable.

³ If you consult an instructor/teaching assistant you must present a flowchart before receiving assistance with implementation.

⁴ These comments simplify the marking process (e.g., # "The Grinch" – animated, CGI, starring Benedict Cumberbatch, etc.)