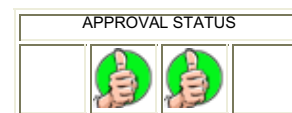


Title: Recursive Algorithm Use

Version: 1



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Spell Check

Save Student Learning Outcome

**Outcome Category:**

- Communication Skills
- Critical Thinking Skills
- Content/Discipline Knowledge & Skills

**Define Student Learning Outcome:**

The student will be able to

choose one:

- | <u>ANALYSIS</u> | <u>APPLICATION</u> | <u>COMPREHENSION</u> | <u>EVALUATION</u> | <u>KNOWLEDGE</u> | <u>SYNTHESIS</u> |
|-------------------------------------|-----------------------------------|----------------------------------|--------------------------------|---------------------------------|---------------------------------|
| <input type="radio"/> analyze | <input type="radio"/> apply | <input type="radio"/> classify | <input type="radio"/> assess | <input type="radio"/> cite | <input type="radio"/> arrange |
| <input type="radio"/> appraise | <input type="radio"/> choreograph | <input type="radio"/> depict | <input type="radio"/> choose | <input type="radio"/> define | <input type="radio"/> collect |
| <input type="radio"/> calculate | <input type="radio"/> compute | <input type="radio"/> describe | <input type="radio"/> decide | <input type="radio"/> identify | <input type="radio"/> combine |
| <input type="radio"/> categorize | <input type="radio"/> construct | <input type="radio"/> discuss | <input type="radio"/> defend | <input type="radio"/> indicate | <input type="radio"/> compose |
| <input type="radio"/> compare | <input type="radio"/> demonstrate | <input type="radio"/> explain | <input type="radio"/> estimate | <input type="radio"/> label | <input type="radio"/> create |
| <input type="radio"/> contrast | <input type="radio"/> dramatize | <input type="radio"/> express | <input type="radio"/> evaluate | <input type="radio"/> list | <input type="radio"/> design |
| <input type="radio"/> criticize | <input type="radio"/> employ | <input type="radio"/> locate | <input type="radio"/> grade | <input type="radio"/> match | <input type="radio"/> formulate |
| <input type="radio"/> debate | <input type="radio"/> generate | <input type="radio"/> paraphrase | <input type="radio"/> judge | <input type="radio"/> name | <input type="radio"/> integrate |
| <input type="radio"/> determine | <input type="radio"/> illustrate | <input type="radio"/> recognize | <input type="radio"/> justify | <input type="radio"/> quote | <input type="radio"/> manage |
| <input type="radio"/> diagram | <input type="radio"/> interpret | <input type="radio"/> report | <input type="radio"/> measure | <input type="radio"/> recall | <input type="radio"/> organize |
| <input type="radio"/> differentiate | <input type="radio"/> operate | <input type="radio"/> restate | <input type="radio"/> rate | <input type="radio"/> relate | <input type="radio"/> perform |
| <input type="radio"/> distinguish | <input type="radio"/> practice | <input type="radio"/> review | <input type="radio"/> revise | <input type="radio"/> repeat | <input type="radio"/> prepare |
| <input type="radio"/> experiment | <input type="radio"/> schedule | <input type="radio"/> summarize | <input type="radio"/> score | <input type="radio"/> reproduce | <input type="radio"/> produce |
| <input type="radio"/> inspect | <input type="radio"/> sketch | <input type="radio"/> tell | <input type="radio"/> value | <input type="radio"/> select | <input type="radio"/> propose |
| <input type="radio"/> solve | <input type="radio"/> use | | | | |

standard recursive algorithmic techniques for the solution of complex problems in computer science. This will be assessed upon completion of the 3-hour course COP 4530, Data Structures, Algorithms and Generic Programming.

Preview

**Assessment and Evaluation Process:**

Be sure to include the standard(s) and measure(s).

This is an important skill for a CS major and data on this will be collected by the faculty instructor from a capstone activity. This will result in 80% of the students enrolled in COP 4530 during 2006-2007 scoring 70% or better as determined by a

Method(s):

choose
one or
more:

- behavioral observation
- capstone course evaluation
- class performance or presentation
- clinical evaluation
- course embedded assignment (often in tandem with exam question bank)
- course report
- department assessment
- departmental exam/comprehensive exam/preliminary exam
- faculty committee evaluation of dissertation, thesis or treatise
- faculty designed comprehensive or capstone examination and assignment
- instructor constructed exam
- internship evaluation of specific activity
- judged exhibition
- judged performance
- national or state standardized exam
- performance on licensing or other external examination
- portfolio of student work
- pre-test/post-test evaluation
- problem-solving exercise
- professional judged performance or demonstration of ability in context
- project evaluation
- public performance or presentation (juried)
- simulation
- videotaped or audio-taped performance
- written report or essay

Preview

**Results**

In the semester Fall 2006, 93% of the students completed at least 70% of the objectives of the capstone assignment (weblink). For the semester Spring 2007, 76% of the students completed at least 70% of the objectives of the capstone assignment (weblink).



Improvements Made or Action Plan Based on Analysis of Results

Successful completion of programming assignments require a set of contributory skills. Currently the section lab meetings with the COP 4530 TA provide an opportunity for the students to request help and instruction with developing such auxiliary skills. It is suggested that future instructors create a secondary set of "lightweight" assignments, focused on the buildup of such auxiliary skills. These should be used in a structured approach to the lab section meetings, with the assignments distributed for completion during the lab time. Such a body of assignments can be put together from material developed over the years by instructors and TAs, to capture the best observed practices in the form of "institutional memory", guaranteeing consistency of delivered instruction quality and as a platform for continuing improvement through successive review.

Potential Budget Impact:

- Yes
- No

All budgetary requests will be considered during the Institutional Effectiveness Plan Approval Process.

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File Bank

- Fall 2006 COP 4530 capstone assignment [http://www.cs.fsu.edu/~breno/COP-4530/as...]
- Spring 2007 COP 4530 Capstone assignment [http://www.cs.fsu.edu/~duan/classes/cop4...]

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