

**Course Assessment Report**  
**Washtenaw Community College**

Discipline	Course Number	Title
Radiography	150	RAD 150 11/21/2016- Clinical Education
Division	Department	Faculty Preparer
Health Sciences	Allied Health	Jim Skufis
Date of Last Filed Assessment Report		

**I. Assessment Results per Student Learning Outcome**

Outcome 1: Perform radiographic positioning of the chest, abdomen, upper and lower extremities, spinal column, bony thorax and contrast studies.

- Assessment Plan
  - Assessment Tool: Radiographic Procedure Evaluations and RAD 150 Simulations exams.
  - Assessment Date: Spring/Summer 2015
  - Course section(s)/other population: All sections (currently only one section offered).
  - Number students to be assessed: All students
  - How the assessment will be scored: Item analysis from the course simulations of the three exams of the ribs, SI joints, and sacrum/coccyx will be scored using a scoring rubric for evaluation; and completion of the 12 required Radiographic Procedure Evaluations for the RAD 150 semester.
  - Standard of success to be used for this assessment: Eighty-five percent of students will score an average of 95% or better on the three exams pulled from the Simulation Exam, and 95% of students will earn the 12 required competencies for the semester.
  - Who will score and analyze the data: Course instructor and program faculty.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
		2016

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
22	22

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

All students enrolled in RAD 150 were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

There is only one section of RAD 150 and all students were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Item analysis from the course simulation of the three exams of the ribs, SI joints, and sacrum/coccyx were scored using a scoring rubric for evaluation. There are a total of 187 points possible. A simple percentage was calculated for each student from the points totaled on the rubric. The same students' records were examined for completion of the 12 required Radiographic Procedure Evaluations for the RAD 150 semester. Eighty-five percent of students must score an average of 95% or better on the three exams pulled from the Simulation Exam, and 95% of students must earn the 12 required competencies for the semester to meet the benchmark.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

**Met Standard of Success: Yes**  
 Using the scoring rubric to assess the three exams, 6 students scored 100%, 6 scored 99%, 1 scored 98%, 3 scored 97%, 5 scored 96%, and 1 scored 95%. Because all students scored 95% or better, the standard of success was met for this outcome and tool. All of the enrolled students earned the 12 required competencies for the semester. These results indicate that students can perform radiographic positioning of the chest, abdomen, upper and lower extremities, spinal column, bony thorax and contrast studies, and that the standard of success was met for this outcome and tool.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Mastery of manipulation of equipment, patient positioning, radiation protection, patient communication, judgement, and organization of several pieces of equipment in a variety of clinical environments are all indicated in the assessment results. These learning outcomes indicate that students have acquired these clinical skills by the end of their RAD 150 course.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The assessment results do not indicate any weaknesses in students' achievement of the learning outcomes. However, this assessment cannot be used to determine actual image quality because students simulate on fellow students and no images are taken because of radiation safety concerns.

Outcome 2: Demonstrate operating knowledge of radiographic equipment.

- Assessment Plan
    - Assessment Tool: Radiographic Procedure Evaluations and RAD 150 Simulations exams.
    - Assessment Date: Spring/Summer 2015
    - Course section(s)/other population: All sections (currently only one section offered).
    - Number students to be assessed: All students
    - How the assessment will be scored: Item analysis from the course simulations of the three exams of the ribs, SI joints, and sacrum/coccyx will be scored using a scoring rubric for evaluation; and completion of the 12 required Radiographic Procedure Evaluations for the RAD 150 semester.
    - Standard of success to be used for this assessment: Eighty-five percent of students will score an average of 95% or better on the three exams pulled from the Simulation Exam, and 95% of students will earn the 12 required competencies for the semester.
    - Who will score and analyze the data: Course instructor and program faculty.
1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
		2016

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
22	22

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

All students enrolled in RAD 150 were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

There is only one section of RAD 150 and all students were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Item analysis from the course simulation of the three exams of the ribs, SI joints, and sacrum/coccyx were scored using a scoring rubric for evaluation. There are a total of 187 points possible. A simple percentage was calculated for each student from the points totaled on the rubric. The same students' records were examined for completion of the 12 required Radiographic Procedure Evaluations for the RAD 150 semester. Eighty-five percent of students must score an average of 95% or better on the three exams pulled from the Simulation Exam, and 95% of students must earn the 12 required competencies for the semester to meet this benchmark.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

Using the scoring rubric to assess the three exams, 6 students scored 100%, 6 scored 99%, 1 scored 98%, 3 scored 97%, 5 scored 96%, and 1 scored 95%. Because all students scored 95% or better, the standard of success was met for this outcome and tool. All of the enrolled students earned the 12 required competencies for the semester. These results indicate that students have demonstrated an operating knowledge of radiographic equipment, and that the standard of success was met for this outcome and tool.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Mastery of manipulation of equipment, patient positioning, radiation protection, patient communication, judgement, and organization of several pieces of equipment in a variety of clinical environments are all indicated in the assessment results. These learning outcomes indicate that students have acquired these clinical skills by the end of their RAD 150 course.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The assessment results do not indicate any weaknesses in students' achievement of the learning outcomes. However, this assessment cannot be used to determine actual image quality because students simulate on fellow students and no images are taken because of radiation safety concerns.

Outcome 3: Provide the appropriate patient care during the radiographic procedure.

- Assessment Plan
  - Assessment Tool: Radiographic Procedure Evaluations and RAD 150 Final Performance Evaluations.
  - Assessment Date: Spring/Summer 2015
  - Course section(s)/other population: All sections (currently only one section offered).
  - Number students to be assessed: All students
  - How the assessment will be scored: Item analysis of question #4 of the Radiographic Procedure Evaluation concerning patient identification and question #7 of the Radiographic Procedure Evaluation concerning patient transfer will be done, along with an item analysis of question #2 of the RAD 150 Final Performance Evaluation concerning Patient Safety.
  - Standard of success to be used for this assessment: Ninety-five percent of students will receive a "Yes" from their evaluator to Question #4 of the Radiographic Procedure Evaluation which reads: "Identify correct patient according to requisition and departmental policy," and 95% of students will receive a "Yes" from their evaluator to Question #7 of the Radiographic Procedure Evaluation which reads: "Assist patient to the upright bucky and/or radiographic table, if required." Finally, 95% of students will received

an "Effective Performance" rating from their evaluator to Question #2 of the RAD 150 Final Performance Evaluation concerning Patient Safety.

- o Who will score and analyze the data: Course instructor and program faculty.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
		2016

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
22	22

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

All students enrolled in RAD 150 were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

There is only one section of RAD 150 and all students were assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Question #4 of the Radiographic Procedure Evaluation reads: "Identify correct patient according to requisition and departmental policy," and Question #7 of the Radiographic Procedure Evaluation reads: "Assist patient to the upright bucky and/or radiographic table, if required." A "Yes" or "No" answer was recorded for each student for these two questions from the Radiographic Procedure Evaluation. Ninety-five percent of students must receive a "Yes" from their evaluator. Question #2 of the RAD 150 Final Performance Evaluation concerns Patient Safety, and 95% of students must received an "Effective Performance" rating from their evaluator.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

All 22 students evaluated received a "Yes" to Question #4 and Question #7 of the Radiographic Procedure Evaluation. All students also received an "Effective Performance" rating for Question #2 of the RAD 150 Final Performance Evaluation concerns Patient Safety. These results indicate that students provide the appropriate patient care during the radiographic procedure, and that the standard of success was met for this outcome and tool.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Awareness of patient safety and care during a procedure are all indicated by these results. These learning outcomes show that students have acquired these clinical skills by the end of their RAD 150 course.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

The assessment results do not indicate any weaknesses in students' achievement of the learning outcomes, and because they were gathered during actual patient exams, there is no better marker.

## II. Course Summary and Action Plans Based on Assessment Results

1. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

This course is meeting the needs of students enrolled in the radiography program to acquire the skills of a radiographer. Nothing new was brought to light.

2. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

Assessment results will be shared with the departmental faculty during regular department meetings and with the program's advisory committee during our program's twice-annual meetings.

3. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
No changes intended.			

4. Is there anything that you would like to mention that was not already captured?

**III. Attached Files**

[Course Assessment Rubric from Simulation](#)  
[RAD 150 Course Assessment Data](#)

<b>Faculty/Preparer:</b>	Jim Skufis	<b>Date:</b> 01/05/2017
<b>Department Chair:</b>	Connie Foster	<b>Date:</b> 01/05/2017
<b>Dean:</b>	Valerie Greaves	<b>Date:</b> 01/06/2017
<b>Assessment Committee Chair:</b>	Ruth Walsh	<b>Date:</b> 02/01/2017

**COURSE ASSESSMENT REPORT**

**Background Information**

1. Course assessed:

Course Discipline Code and Number: RAD 150  
Course Title: Clinical Education  
Division/Department Codes: 15600

2. Semester assessment was conducted (check one):

- Fall 20\_\_
- Winter 20\_\_
- Spring/Summer 20 12

3. Assessment tool(s) used: check all that apply.

- Portfolio
- Standardized test
- Other external certification/licensure exam (specify):
- Survey
- Prompt
- Departmental exam
- Capstone experience (specify):
- Other (specify): Radiographic Procedure Evaluations, RAD 150 Simulation exams, and RAD 150 Final Performance Evaluation.

4. Have these tools been used before?

- Yes
- No

If yes, have the tools been altered since its last administration? If so, briefly describe changes made.

The assessment tool has not been altered since its last administration.

5. Indicate the number of students assessed/total number of students enrolled in the course.

Twenty-five students enrolled in RAD 150 Clinical Education were assessed.

6. Describe how students were selected for the assessment.

All students enrolled in RAD 150 were assessed.

**Results**

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.

No changes were indicated in the prior assessment since student scores on the RAD 150 Final Clinical Performance Evaluations met the established benchmarks; therefore no changes have been made in the course.

2. State each outcome from the master syllabus that was assessed.

- 1. Perform radiographic positioning of the chest, abdomen, upper and lower extremities, spinal column, boney thorax, and contrast studies.
- 2. Demonstrate operating knowledge of radiographic equipment.
- 3. Provide the appropriate patient care during the radiographic procedure.

3. Briefly describe assessment results based on data collected during the course assessment, demonstrating the extent to which students are achieving each of the learning outcomes listed above. Please attach a summary of the data collected.

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**COURSE ASSESSMENT REPORT**

All 25 student simulations were assessed. Item analysis from the course simulations of the three exams of the ribs, SI joints, and sacrum/coccyx were scored using a scoring rubric for evaluation.

The same 25 students' records were examined for completion of the 12 required Radiographic Procedure Evaluations for the RAD 150 semester, and an item analysis of question #4 of the Radiographic Procedure Evaluation concerning patient identification and question #7 of the Radiographic Procedure Evaluation concerning patient transfer was done. Finally, an item analysis of question #2 of the RAD 150 Final Performance Evaluation concerning Patient Safety was performed. The simulation scoring rubric, the Radiographic Procedure Evaluation, and the RAD 150 Final Performance Evaluation are attached. Using the scoring rubric to assess the three exams, 7 students scored 100%, 12 scored 99%, 1 scored 98%, 3 scored 97%, 1 scored 96%, and 1 scored 94%. All 25 students completed the 12 required competencies, and all demonstrated the needed behaviors to be given a "Yes" to questions #4 and #7 on their Radiographic Procedure Evaluation forms and an "Effective Performance" on question #2 of the RAD 150 Final Performance Evaluation concerning Patient Safety.

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success.

Eighty-five percent of students will score an average of 95% or better on Simulation Exam; of the students assessed, 96% received a 95% or better.

Ninety-five percent of students will earn the 12 required competencies for the semester; of the students surveyed, 100% received all competencies required for the semester.

Ninety-five percent of students will receive a "Yes" from their evaluator to Question #4 of the Radiographic Procedure Evaluation which reads: "Identify correct patient according to requisition and departmental policy," and 95% of students will receive a "Yes" from their evaluator to Question #7 of the Radiographic Procedure Evaluation which reads: "Assist patient to the upright bucky and/or radiographic table, if required." Of the students surveyed, 100% received a "Yes" on both questions.

Finally, 95% of students will receive an "Effective Performance" rating from their evaluator to Question #2 of the RAD 150 Final Performance Evaluation concerning Patient Safety; of the students surveyed, 100% received a "Effective Performance" rating.

A 95% percent was used as the standard of success because this is the minimum score students must achieve if they are to pass their ARRT mandatory and elective competencies.

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

**Strengths:** Mastery of manipulation of equipment, patient positioning, radiation protection, patient communication, judgement, and organization of several pieces of equipment in a variety of clinical environments are all indicated in the assessment results. These learning outcomes indicate that students have acquired these clinical skills by the end of their RAD 150 course.

**Weaknesses:** The assessment results do not indicate any weaknesses in students' achievement of the learning outcomes. However, this assessment cannot be used to determine actual image quality because students simulate on fellow students and no images are taken because of radiation safety concerns.

**Changes influenced by assessment results**

1. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses, along with a timeline for these actions.

Retrospective analysis of the three exams from the simulation did not reveal any pattern to the items missed. Because these exams are commonly performed in all clinical settings and are required competencies for the ARRT registry, this assessment should be a good indicator of student learning for this course. Therefore, no changes to the assessment method are warranted.

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**COURSE ASSESSMENT REPORT**

2. Identify any other intended changes that will be instituted based on results of this assessment activity (check all that apply). Please describe changes and give rationale for change.

Master syllabus  
Change/rationale:

Curriculum  
Change/rationale:

Course syllabus  
Change/rationale:

Course assignments  
Change/rationale:

Course materials (check all that apply)  
 Textbook  
 Handouts  
 Other:  
 Change/rationale:

Instructional methods  
Change/rationale:

Other: None  
Change/rationale: The outcome expectation for this assessment has been met.

**Future plans**

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course.

Because the assessment tool does measure the learning outcome of performing radiographic exams of the spinal column and ribs in a realistic manner and because other components are measured from actual student exams on real patients (i.e., students must simulate the three exams and demonstrate proficiency to earn the ARRT competency), it is effective in measuring student learning outcomes.

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

Because this tool was effective, no changes will be made..

3. Missing — Sp/SU 2012

**Submitted by:**

Name: <u><i>J. [Signature]</i></u>	Date: <u>8/8/2012</u>
Department Chair: <u><i>[Signature]</i></u>	Date: <u>8/8/12</u>
Dean: <u><i>M. Shouart</i></u>	Date: <u>8/10/12</u>

**COURSE ASSESSMENT REPORT**

**Background Information**

1. Course assessed:  
 Course Discipline Code and Number: RAD 150  
 Course Title: Clinical Education  
 Division/Department Codes: 15600
  
2. Semester assessment was conducted (check one):  
 Fall 20\_\_  
 Winter 20\_\_  
 Spring/Summer 2014
  
3. Assessment tool(s) used: check all that apply.  
 Portfolio  
 Standardized test  
 Other external certification/licensure exam (specify):  
 Survey  
 Prompt  
 Departmental exam  
 Capstone experience (specify):  
 Other (specify): Radiographic Procedure Evaluations, RAD 150 Simulation exams, and RAD 150 Final Performance Evaluation.
  
4. Have these tools been used before?  
 Yes  
 No

If yes, have the tools been altered since its last administration? If so, briefly describe changes made.

5. Indicate the number of students assessed/total number of students enrolled in the course.  
 Twenty students were assessed out of the twenty-five enrolled in the class.
  
6. Describe how students were selected for the assessment.  
 Assessed students were selected randomly.

**Results**

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.  
 No prior assessments have been done for this course.
  
2. State each outcome from the master syllabus that was assessed.  
 Perform radiographic positioning of the chest, abdomen, upper and lower extremities, spinal column, boney thorax, and contrast studies.  
 Demonstrate operating knowledge of radiographic equipment.  
 Provide the appropriate patient care during the radiographic procedure.
  
3. Briefly describe assessment results based on data collected during the course assessment, demonstrating the extent to which students are achieving each of the learning outcomes listed above. Please attach a summary of the data collected.  
 Twenty student simulations were chosen at random. Item analysis from the course simulations of the three exams of the ribs, SI joints, and sacrum/coccyx were scored using a scoring rubric for evaluation. The same 20 students' records were examined for completion of the 12 required Radiographic Procedure Evaluations for the RAD 150 semester, and an item analysis of question #4 of the Radiographic Procedure Evaluation concerning patient identification and question #7 of the Radiographic Procedure Evaluation concerning patient transfer was done. Finally, an item analysis of question #2 of the RAD 150 Final Performance Evaluation concerning Patient Safety was performed. The simulation scoring rubric, the

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**COURSE ASSESSMENT REPORT**

Radiographic Procedure Evaluation, and the RAD 150 Final Performance Evaluation are attached. Using the scoring rubric to assess the three exams, 6 students scored 100%, 6 scored 99%, 1 scored 98%, 4 scored 97%, 2 scored 95%, and 1 scored 91%. All twenty students completed the 12 required competencies, and all demonstrated the needed behaviors to be given a "Yes" to questions #4 and #7 on their Radiographic Procedure Evaluation forms and an "Effective Performance" on question #2 of the RAD 150 Final Performance Evaluation concerning Patient Safety.

- 4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success.

Eighty-five percent of students will score an average of 95% or better on Simulation Exam; of the students assessed, 95% received a 95% or better.

Ninety-five percent of students will earn the 12 required competencies for the semester; of the students surveyed, 100% received all competencies required for the semester.

Ninety-five percent of students will receive a "Yes" from their evaluator to Question #4 of the Radiographic Procedure Evaluation which reads: "Identify correct patient according to requisition and departmental policy," and 95% of students will receive a "Yes" from their evaluator to Question #7 of the Radiographic Procedure Evaluation which reads: "Assist patient to the upright bucky and/or radiographic table, if required." Of the students surveyed, 100% received a "Yes" on both questions.

Finally, 95% of students will receive an "Effective Performance" rating from their evaluator to Question #2 of the RAD 150 Final Performance Evaluation concerning Patient Safety; of the students surveyed, 100% received a "Effective Performance" rating.

A 95% percent was used as the standard of success because this is the minimum score students must achieve if they are to pass their ARRT mandatory and elective competencies.

- 5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

Strengths: Manipulation of equipment, patient positioning, radiation protection, patient communication, judgement and organization.

Weaknesses: This assessment cannot be used to determine actual image quality because students simulate on fellow students and no images are taken because of radiation safety concerns.

**Changes influenced by assessment results**

- 1. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses, along with a timeline for these actions.

Retrospective analysis of the three exams from the simulation indicate that the items missed most often dealt with improper collimation. This should be correlated back to the student's midterm and final semester evaluation to determine if the lack of proper collimation has been noticed in other exams and is truly a skill they haven't mastered. Because these exams are commonly performed in all clinical settings and are required competencies for the ARRT registry, this assessment should be a good indicator of student learning for this course. Although the outcome expectation for this assessment has been met, it is felt that more emphasis needs to be placed on proper collimation of the images during clinical instruction.

- 2. Identify any other intended changes that will be instituted based on results of this assessment activity (check all that apply). Please describe changes and give rationale for change.

Master syllabus  
Change/rationale:

Curriculum  
Change/rationale:

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COURSE ASSESSMENT REPORT

Course syllabus  
Change/rationale:

Course assignments  
Change/rationale:

Course materials (check all that apply)  
 Textbook  
 Handouts  
 Other:  
Change/rationale:

Instructional methods  
Change/rationale:

Other:

Change/rationale: Although the outcome expectation for this assessment has been met, it is felt that more emphasis needs to be placed on proper collimation of the images during clinical instruction.

Future plans

- Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course.  
Because the assessment tool does measure the learning outcome of performing radiographic exams of the spinal column and ribs in a realistic manner and because other components are measured from actual student exams on real patients (i.e., students must simulate the three exams and demonstrate proficiency to earn the ARRT competency), it is effective in measuring student learning outcomes.
- If the assessment tools were not effective, describe the changes that will be made for future assessments.  
Although this tool was effective, more guided practice for students would be helpful, especially concerning proper collimation.

Submitted by:

Name: *James M. Goff*

Date: 9/2/09

Department Chair: *Comi Lutz*

Date: 09/02/09

Dean: *J.P. W. Lee*

Date: 09/02/09

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