# UMass Boston CS 410 26 Homework 3
# Posted Monday, 27 April 2026
# Due Thursday, 7 May 2026 at 11:59 pm

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## 0 Directions

Homework must be typed and converted to Portable Document Format (PDF). Drawings can be hand-written, photographed and included. To submit your homework, prepare one PDF file called `hw3.pdf` — the filename must be exactly `hw3.pdf`, otherwise it will not be collected. Upload the file to your course directory, the `cs410` folder linked to your home directory on the CS Linux server. Please do not put your file in a subdirectory.

If you have trouble with uploading, email `operator@cs.umb.edu` for help and copy me.

The questions in this homework are based on the reading in Essential Scrum (ES) by Kenneth S. Rubin, 2013. For this homework, the reading is ES, Chapter 17, Envisioning (Product Planning), pp 287-306, and some other figures and paragraphs in the book.

## 1 Explore the vision statement

We all start new things with a vision.

### 1.1 Your Client's Vision

For the long project, each of our clients wrote a statement of what is to be built. The statements are posted on the class website. Each of them begins with 1-3 sentences of their vision. Please review the top-level statements for all the long projects.

(10 pts) Now focus on the client statement for your long project. Copy the vision sentences given for the long project you are building into your hw3.pdf. Title it Client Vision.

### 1.2 Rubin's Chapter 17: Envisioning (Product Planning)

In Chapter 17, Rubin gives a running example of what worker Roger is building: a new product called Smart-Review4You (SR4U). Rubin introduces the concept of visioning by citing President Kennedy's 1961 statement of his vision go to the moon, p290. Rubin then explains how Roger's team decides to put their vision for SR4U in a press release, chosen from the options in Table 17-1 Popular Vision Formats, p293.

Rubin points out three characteristics that the vision needs to consider. The format that the vision takes does not matter. Its length to express does matter, and it must be kept short. And that the vision is "frequently expressed in terms of how the stakeholders get value.", p292.

Study Figure 17.3 Areas of stakeholder value, p292. Note how each of the five main areas has 2-4 subareas. Note how worker Roger indicates the areas of value for SR4U in column 1 in Table 17.2 SmartReview4You Potential Areas of Stakeholder Value, p293.

(10 points) Write your own table for your long project potential areas of stakeholder value. Find at least three in different areas. List the area in column 1. Give a 1-3 sentence description in column 2.

# 2 Identify the Steps in Rubin's Agile Approach

In Closing, p306, Rubin summarizes how he sees envisioning. He cites three things. We need to look at each one and understand why it is important. Then we need to give it a try!

## 2.1 Envision and give high-level product backlog with product road map

Rubin gave an illustration of the approach used by Roger for SR4U. Once Roger had the vision stated, he wrote the user story cards. Read the five user story cards for SR4U, p294-295.

You can go back and review the three-part format of each card as explained in Chapter Five, Requirements and User Stories, p83 on.

(10 points) Define the user story format. Title it Format. Define the approach INVEST by listing each of the six characteristics. Title it INVEST.

Be sure to mention 1) the user role you find most important, 2) the goal (what that class of user wants to achieve) and 3) the benefit in client terms (use the words "so that" to introduce it).

(15 points) Using the 3-part formula, write a user story card you feel is key to your long project. Title it User Story Card. Put a box around it.

Do not do a road map yet, since that is more of a team activity.

## 2.2 Set the confidence threshold and do a knowledge acquisition sprint

Rubin gave an illustration of how a knowledge-acquisition sprint could achieve the confidence threshold selected. In Economically Sensible Envisioning, p299, review how envisioning is an investment. Notice the trade-off between too-little and too much. Then study Figure 17.8 Consequences of setting the confidence threshold bar too high, p301.

(10 points) Explain the trade-off in two sentences paraphrasing the book's words. Title it Trade-off.

(15 points) Explain why excessively high confidence threshold is not helpful. State your idea of a helpful confidence threshold in about 50 words. Title it Setting Confidence Threshold.

(15 points) Your team has likely done some knowledge acquisition tasks already. Describe one such task you have done or indicate one that you think would be helpful. Title it Knowledge Acquisition.

## 2.3 Stay economically sensible to align with Scrum customer-value-creation work

Rubin gave guidance on how to be economically sensible in envisioning so as to align with the Scrum customer-value-creation work that will follow. Review Figure 17-7 Guidelines for economically sensible envisioning, p 300.

In the figure, the term Validated Learning appears. It is quite important in Scrum. Please look it up in the book's glossary. Consider whether you understand it. See also the overview, pp44-45.

(5 points) Write your own definition of Validated Learning.

(10 points) For this section, write a list of what you did on the long project, including useful pages and your comments. Title it Notes on Keeping Aligned with Customer-Value-Creation.