

Software Engineering with LEGO

Clear Communication and the Waterfall Process

Step 1: Requirements Worksheet

Product ID# _____ (copy from the Initial Requirements sheet)

Objective:

Write down complete product requirements as an itemized list. Be sure to incorporate all initial requirements. Add any missing information, if necessary.

Revised requirements:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

When done:

Write down the Product ID to the top of this page from the Initial Requirements sheet.
Pass this document to the next team.
Return original requirements to the instructor.

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Step 2: Design Worksheet

Product ID# _____ (copy from the Requirements Worksheet)

Objective:

Design the product based on the updated requirements by drawing a sketch. You may use any combination of side views and/or a 3D view.

Your sketch should include some dimensions/proportions, as necessary.

Your design must not contain any words, but numbers are OK.

Product design:

When done:

Write down the Product ID to the top of this page from the Requirements Worksheet.

Pass this document to the next team.

Return the requirements sheet to the instructor.

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Step 3: Implementation Worksheet

Product ID#_____ (copy from the Implementation Worksheet)

Objective:

Build a product out of LEGO bricks based on the sketches and the specified dimensions

Do not write/draw anything below this line.

When done:

Write down the Product ID to the top of this page from the Design Worksheet.

Pass the completed product to the next team.

Return the design document to the instructor.

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Step 4: Verification Worksheet

Product ID# _____ (copy from the Implementation Worksheet)

Objective:

- Compare the original product requirements with the completed product.
- Verify each requirement by testing whether the constructed building meets that requirement.
- Write down any inconsistencies/discrepancies you have identified.

Product inconsistencies:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

When done:

- Write down the Product ID to the top of this page from the Implementation Worksheet.
- Be ready for debriefing.