Planning and Organizing a Climate Change Response App
- Session 5-

Learning Guide

Learning Objectives:

Today, we will explore an example of a climate change response app called 'My Resilience Contribution Calculator.' We'll follow the block coding steps used in the app, write a summary report of our learnings, and learn how to create an app development plan for the e-ICON World Contest.

1) Follow a modeling tool to do block coding.

2) Review and organize what you've learned in a report.

3) Learn how to write an app development plan for the e-ICON World Contest.

<Explanation Video for Session 5>

Exploring Ways to Improve the Example Climate Change Response App "Earth Guardian Energy"

(Activity) Use the example climate change response apps—**'My Resilience Contribution Calculator'**
Earth Guardian Energy—again. Write freely about what could be improved, such as the app's features,
scoring system, messages, or user interface (UI).

📄 웹페이지 링크: https://capi.rootsall.net/modeling/7/result/?id=126522

⊙✓1 What I would like to improve & Why (1)

[281] is-empty
[280] tiptap

제출

⊙✓2 What I would like to improve & Why (2)(If there is nothing to add, write "None.")

[329] is-empty
[328] tiptap

제출

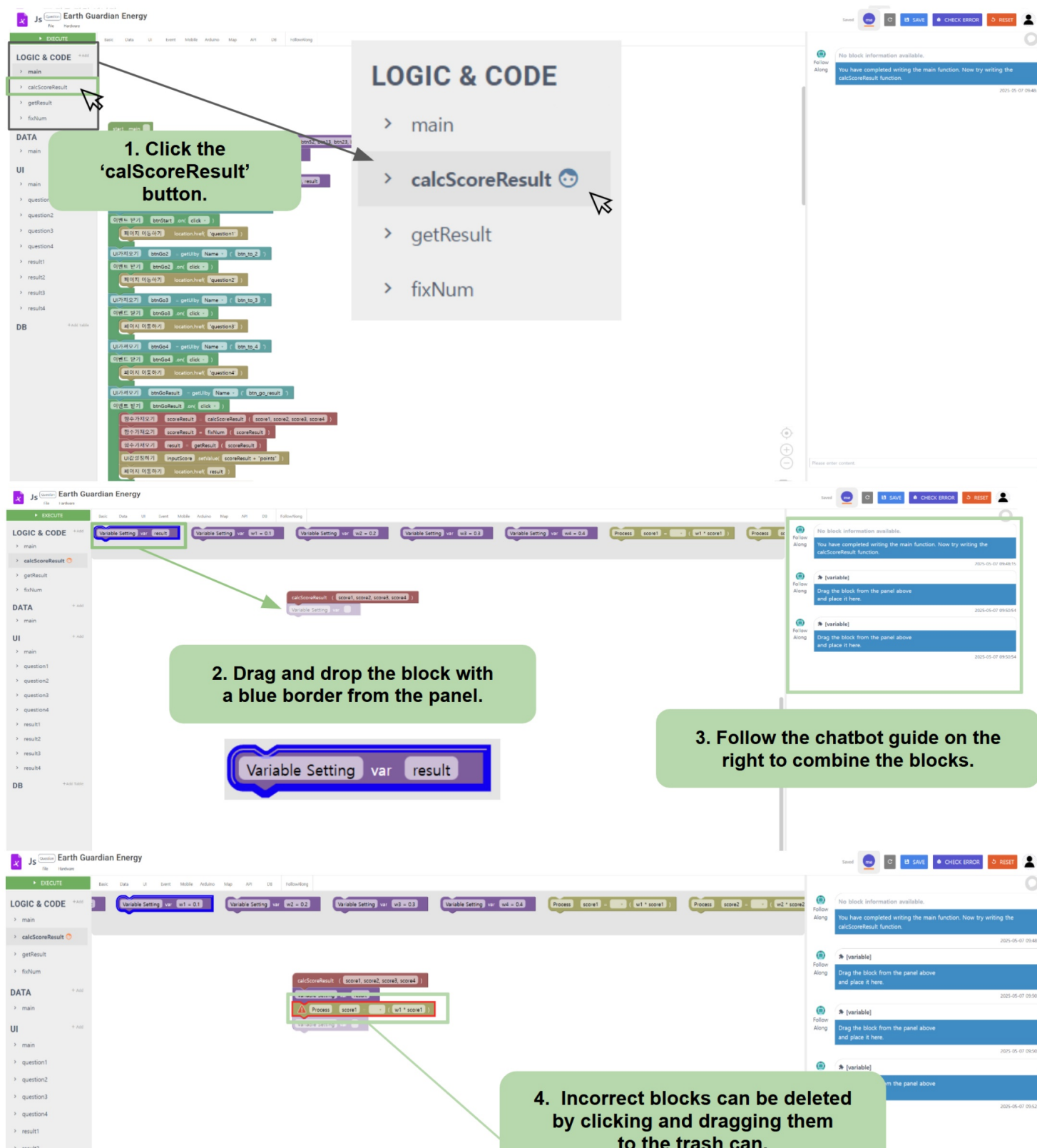# Follow the Modeling Tool to Complete Block Coding

Coding is the **process of expressing how an app works using commands that a computer
can understand**. A modeling tool is a visual tool that uses blocks to demonstrate how an app
runs and how calculations are made.

Use the modeling tool to recreate the calculation formula of the 'My Resilience Contribution
Calculator' app using block coding.

| Bloock | Explanation |

Variable Setting var ◯	• A variable block is used to store a value. • It creates a "box" called a variable that can hold numbers or text, such as "score," "count," or "name." • For example, you can create a variable called "score" and store the value you want in it.
Process ◯ = ◯ ▼ (◯)	• A processing block is used to store the result of a calculation in a variable. • It performs a calculation and stores the result in a variable. • For example, if you write "score = total of activity scores," the sum of all the activity scores will be stored in the variable called "score."

❷3 **(Activity)** Follow the steps below to code the calculation formula used in the example **climate change response app, 'Earth Saver Energy,'** using the provided guidelines.

<Guidelines>

1. Click the 'calScoreResult' button.

2. Drag and drop the block with a blue border from the panel.

3. Follow the chatbot guide on the right to combine the blocks.

4. Incorrect blocks can be deleted by clicking and dragging them to the trash can.

Js [Question] Earth Guardian Energy

EXECUTE

LOGIC & CODE
> main
> calcScoreResult
> getResult
> fixNum

DATA
> main

UI
> main
> question1
> question2
> question3
> question4
> result1
> result2
> result3
> result4

DB

calcScoreResult (score1, score2, score3, score4)
Variable Setting var result
Variable Setting var w1 = 0.1
Variable Setting var w2 = 0.2
Variable Setting var w3 = 0.3
Variable Setting var w4 = 0.4
Process score1 - (w1 * score1)
Process score2 - (w2 * score2)
Process score3 - (w3 * score3)
Process score4 - (w4 * score4)
Process result - (score1 + score2 + score3 + score4)
Please enter a comment Show
CODE return result

SAVE CHECK ERROR RESET

**5. After completing the coding,
press the 'Execute' button to finish the app
and check if it works.**

No block information available.
You have completed the tutorial. Press Run to see it in action.

Organizing Your Report

Organizing Your Report

Table of Contents Guide

Use the following structure to organize your report:

1. Background

Write about the climate change phenomenon you selected while planning an app to address a problem related to SDG Goal 13 (Climate Action).

2. Problem Definition

Write about the specific problem you want to solve.

3. Solution (Design and Implementation)

Describe the climate change response app you plan to create, including its user interface (UI), key features, development tools, programs, and any other technologies needed.

4. Results and Value

Explain the outcome of your app development and the value it provides.

5. Application and Limitations

Describe how your climate change response app could be used in areas such as society, economy, or education. Include any limitations and how you would like to improve them.

Background

⊘4 (1) Background

Write about a climate change phenomenon related to SDG Goal 13, and describe the specific issue or idea you chose to address as a response to climate change.

If you have any related images, please attach them.

<div align="center">**<Example>**</div>

Due to climate change, various disasters such as heat waves, heavy rainfall, droughts, and wildfires are occurring more frequently, causing serious harm to both humans and ecosystems. These are not one-time crises but recurring and worsening problems that require long-term responses.

During my research, I learned about the concept of "resilience," which refers to the ability to adapt to and recover from crises. For example, in Bangladesh, where flooding is common, people practice floating agriculture to continue farming on water, showing a creative way to cope with climate change. I was impressed by how each region adapts in its own way.

After seeing such examples, I wanted to strengthen my own ability to respond to the climate crisis. I believe we can build resilience in our daily lives by saving energy or joining local environmental activities, making small efforts that contribute to positive change around us.

Now, share your own thoughts.

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[1119] tiptap

제출

• **Image** (If you do not have an image, click "Edit Image," type "None," and save.)

ROOTS all

클릭하면 나오는 상단 첫 메뉴
📝 "이미지 편집하기"를 사용하면
도형과 이미지를 편집 추가 할 수 있습니다.

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제출

Problem Definition

⬤❷⁵ (2) Problem Definition

Clearly define the problem you want to solve. If you have a related image, please attach it.

<Example>

It is difficult for individuals to recognize how their daily actions contribute to climate change response or resilience. As a result, many people do not fully grasp the importance of their actions and lack the motivation to engage in climate action.

Therefore, it is essential to find a way to help individuals intuitively understand how their actions impact climate resilience, enabling them to stay motivated to make continuous efforts.

˙Now, share your own thoughts.

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제출

˙Image (If you do not have an image, click "Edit Image," type "None," and save.)

제출

●✔6 (3) Solution (Design and Implementation)

Describe your climate change response app.
Write about the app's user interface (UI), key features, and the development tools and programs you plan to use.
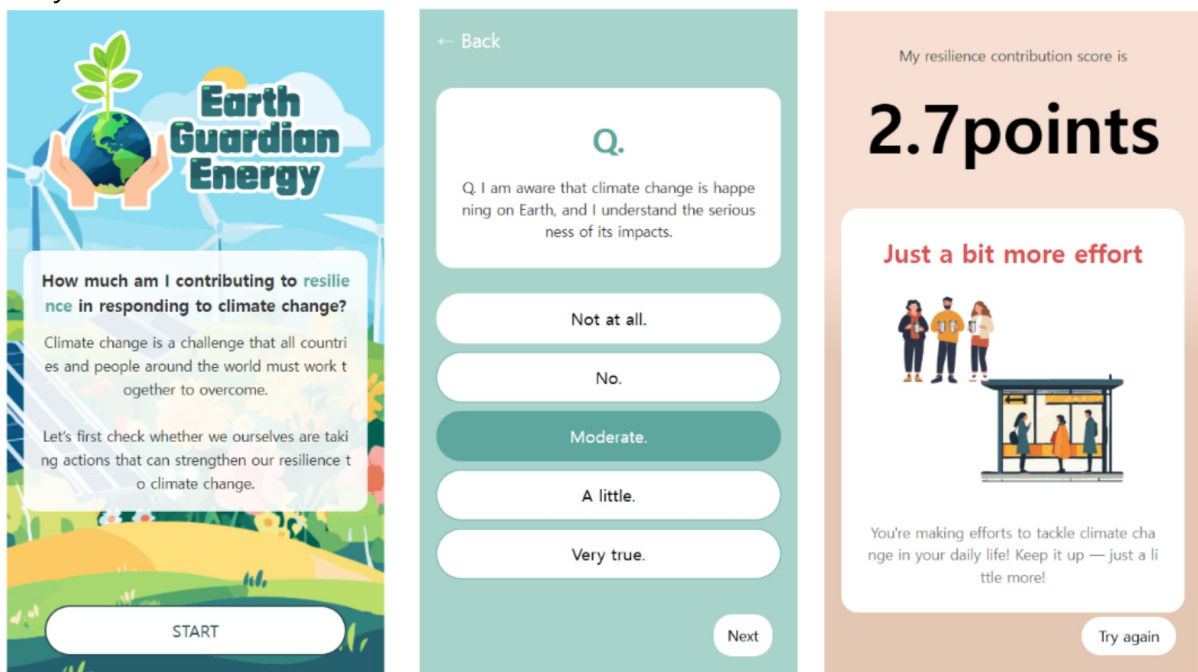
If you have a related image, please attach it.

<div align="center">

<Example>

</div>

I plan to create an app that helps individuals recognize the importance of their everyday actions in responding to climate change by showing how much their activities contribute to climate resilience in the form of a score.

In the app, users can select which climate-friendly actions they have taken—such as using public transportation, joining environmental clean-up activities, saving energy, or raising awareness about climate change. When they click the "See Results" button, they will receive a score reflecting how much their actions have contributed to resilience. This score helps users clearly understand their level of climate action and motivates them to continue taking meaningful steps to reduce climate risks.

Through this experience, users will realize that their personal choices truly matter and will naturally understand the importance of sustainable daily practices. In the Resilience Contribution Calculator app, it is essential to include a function that converts the selected climate actions into a score and presents the results visually.

˙Now, share your own thoughts.

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제출

· Image (If you do not have an image, click "Edit Image," type "None," and save.)

ROOTS all

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📝 "이미지 편집하기"를 사용하면
도형과 이미지를 편집 추가 할 수 있습니다.

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shapes and images through the 📝'Edit Image'
option that appears at the top.

Results and Value

🔘⬤7 (4) Results and Value

Write about the results and value of the climate change response app you developed. If your app is not yet complete, describe the value of your proposed solution.

If you have a related image, please attach it.

<Example>

By selecting the climate actions they have taken and viewing their scores, users can intuitively understand how their behavior contributes to climate change response and resilience.

This motivates users to take action and fosters a sense of responsibility and community awareness as citizens. If these climate actions become more widespread in daily life, they can lead to reduced energy use and lower resource consumption, ultimately helping to reduce the social costs of addressing the climate crisis.

· Now, share your own thoughts.

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제출

 •Image (If you do not have an image, click "Edit Image," type "None," and save.)

ROOTS all

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📝 "이미지 편집하기"를 사용하면
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shapes and images through the 📝 'Edit Image'
option that appears at the top.

제출

Applications and Limitations

🟡8 **(5) Applications and Limitations**

Write about how your climate change response app could be used in various areas such as society, economy, or education. Also, describe any limitations or improvements you would like to make.

If you have a related image, please attach it.

<Example>

This app serves as a tool that encourages individuals to take climate-friendly actions in their daily lives and helps them understand their contribution to resilience in an intuitive way. It can be effectively used in various environmental education settings.

For example, **in schools, students can use the app during environmental classes or project-based learning to reflect on their actions**. **In everyday life,** the app can be used in **"Green Living Challenges" or climate action campaigns as a tool to promote voluntary participation.** This would help not only raise awareness of the climate crisis but also lead to real changes in behavior.

Currently, the app only provides a score based on users' climate actions, but it **lacks specific feedback or action recommendations based on the score**. It would be more effective if users could receive personalized suggestions for improvement.

In addition, if a community feature were added—allowing users to **share their scores, compare progress, and encourage each other**—it could help promote long-term participation and collective action.

˙Now, share your own thoughts.

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[1961] tiptap

제출

˙Image (If you do not have an image, click "Edit Image," type "None," and save.)

제출

How to Write the App Development Plan for the 15th e-ICON World Contest

Have you completed all the lessons from Session 1 to Session 5? If so, it's time to learn how to write the app development plan for the 15th e-ICON World Contest.

You can download the official project proposal template from the e-ICON official website.

제15회 e-ICON 세계대회 앱 개발 계획서(PROJECT PROPOSAL)			
Mobile APP Name (Title)			
ame of Student 1	Surname/ Given Name	Name of School	
Name of Student 2	Surname/ Given Name	Name of School	
Name of Teacher	Surname/ Given Name	Name of School	

☐ **Summary** of Mobile App

☐ **Phenomenon or problems** related to the theme of the contest that you want to realize with SW/Mobile App

☐ **Design of algorithm(mechanism)** and **UI(User Interface)** for SW/Mobile App

☐ **Development Tool/Program**/Other necessary technology that would like to use

☐ **Impact** of Mobile App on Teaching & Learning Activities

The downloaded file will look like the template shown above. You will need to write a development plan for the app you have been designing under the theme of "Responding to Climate Change." Based on everything you've learned from Sessions 1 to 5, you are now ready

to complete the plan.

The development plan should include the following sections:

1. Summary of Mobile App
: Summarize the purpose of your app, its main features, and its target users **clearly** and **concisely**.

2. Phenomenon or Problems Related to the Theme of the Contest You Aim to Address with the SW/Mobile App
: Describe the social phenomenon or problem you intend to solve through your app in relation to the theme "Responding to Climate Change."

3. Design of Algorithm (Mechanism) and UI (User Interface) for SW/Mobile App
: Explain how your app works, including the logic or algorithm behind it and its user interface (UI). Use images to support your explanation, if possible.

4.Development Tool, Programs, Other Necessary Technologies You Plan to Use
: List the tools, programs, and other technologies you plan to use to develop your app.

5. Impact of Mobile App on Teaching & Learning Activities
: Describe how your app can contribute to teaching and learning activities.

Important Guidelines for Writing the App Development Plan for the 15th e-ICON World Contest

When writing your app development plan, make sure to refer to what you have learned in Sessions 1 to 5.

Start by exploring a climate change phenomenon, defining the specific problem you want to solve, and developing a solution through a mobile app.

Please keep the following important points in mind:

1. **The entire development plan must be written in English.**

2. Use a translation tool like Google Translate, to express your ideas in English if needed.

3. Each team must submit only one project proposal. All mobile apps must be developed for the Android platform.

4. The app development program will be announced during the preliminary round.
Participants may use any program except App Builder.

5. The format of the project proposal may change during the evaluation process. If any changes are made, they will be announced on the e-ICON website.

6. Additional pages may be included in the proposal if necessary.

Let's plan our own team's app based on the SDG Goal 13 theme, "Responding to Climate

Let's plan our own team's app based on the SDG Goal 13 theme, "Responding to Climate Change," using your team's original and creative ideas—and take on the challenge of the contest!