Functions and Procedures

Objective

Understanding the concept of functions and procedures by writing "code" for everyday tasks.

Duration

30 – 45 min

Target group

Children 8+ yrs

Experience

Beginner and intermediate

Materials

Designated space, props as needed.

Setup

Choose a few simple tasks that can be demonstrated and broken down. Prepare the space and props.

Description

- o **Introduction:** Introduce functions/procedures as ways programmers organize code into reusable sets of instructions for specific tasks.
- o **Part 1: Demonstrate the Task:** Perform a chosen task (e.g. doing the laundry) without breaking it down to show what will be "coded".
- o **Part 2: Write the "Code":** Your child/ren observe you and write detailed, step-by-step instructions ("code") for it, emphasizing order and clarity.
- o **Part 3: Execute the "Code:** Let your child/ren perform the action next time following its/their own instructions. Alternatively they can read the instructions to you and you follow the steps exactly. Let them notice where the code was unclear or missing steps.
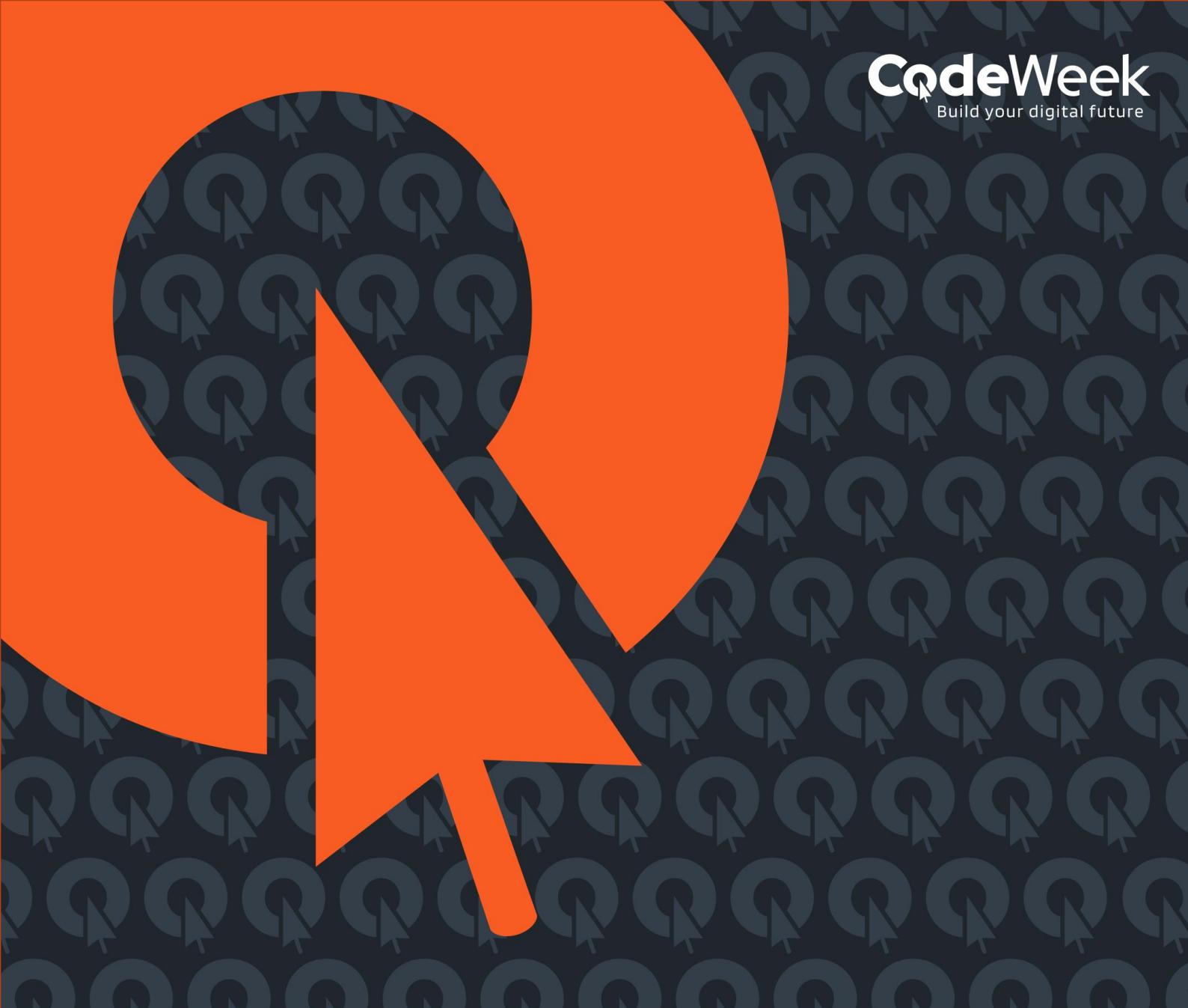
Debugging and Refining

Discuss the results, have your child/ren ask about unclear or missing steps, and work together to "debug" and revise the code for precision and completeness. Repeat execution with the revised code

Discussion and Reflection

Discuss the importance of clear instructions, what happens with unclear/missing instructions, how this is similar to functions in programming, how functions make programming easier, and other everyday examples of functions/procedures

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