

Power Sets

Topic:

Power Sets

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Description:

In mathematics (and computer science), the power set (or powerset) of any set S is the set of all subsets of S , including the empty set and S itself, variously denoted as $P(S)$, $\mathcal{P}(S)$, $\wp(S)$ (using the "Weierstrass \wp "), $\mathbb{P}(S)$, or, identifying the powerset of S with the set of all functions from S to a given set of two elements.

Classes involved:

CS 181, 182, 281, 282

Url:

<http://cohen.herokuapp.com/programs/EducationalTools/getPowerSet/C8M8Y5W6K9F4C2R4>

Screenshot of Webpage:

The screenshot shows a web application interface for calculating power sets. At the top, there is a navigation bar with a logo and links for Home, Account, and Logout. The main content area is titled "Power Sets" and contains a descriptive paragraph about power sets. To the right of the text is a code block showing a Python function `getPowerSet(A)` that generates the power set of a set `A`. Below the text is a section titled "Try it yourself" with an input field for a set (containing "1,2,3,4") and a "Get Power Set" button. To the right of the input field is a text area displaying the resulting power set: `{(), {1}, {2}, {3}, {4}, {1, 2}, {1, 3}, {1, 4}, {2, 3}, {2, 4}, {3, 4}, {1, 2, 3}, {1, 2, 4}, {1, 3, 4}, {2, 3, 4}, {1, 2, 3, 4}}`.