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# Lab7: Matched Z-transform Design

Design a 2nd order analog highpass filter from the general s-transform equation and then derive its digital equivalent using the substitution: . For this filter:

1. Determine the cut-off frequency.

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Description automatically generated

1. Determine the passive component values.
2. Derive the transfer function H(ω).

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1. Plot the frequency response of both the analog and the discrete filter on the same axes. Do this for both magnitude and phase.

Graphical user interface, text, application, email

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Graphical user interface, text, application

Description automatically generated

Chart, line chart

Description automatically generated