

Supplemental Notes for Lecture 12 of CS 5001
(Foundations of CS) for the Fall, 2018 session
at the Northeastern University Silicon Valley
Campus.

Data Model Journals and Publisher

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Data Model for Journals and Publisher

- This animation shows the data model during the creation of a Publisher and three Journals for the example shown in lectures 11 (version 4) and lecture 12.
- The main function first creates a Publisher for the National Geographic Society, then creates and adds Journals for three of its publications:
 - National Geographic
 - National Geographic Explorer
 - National Geographic Kids

Data Model for Journals and Publisher

Publisher

name:
nJournals:
maxJournals:
journals:

newPublisher: allocate Publisher

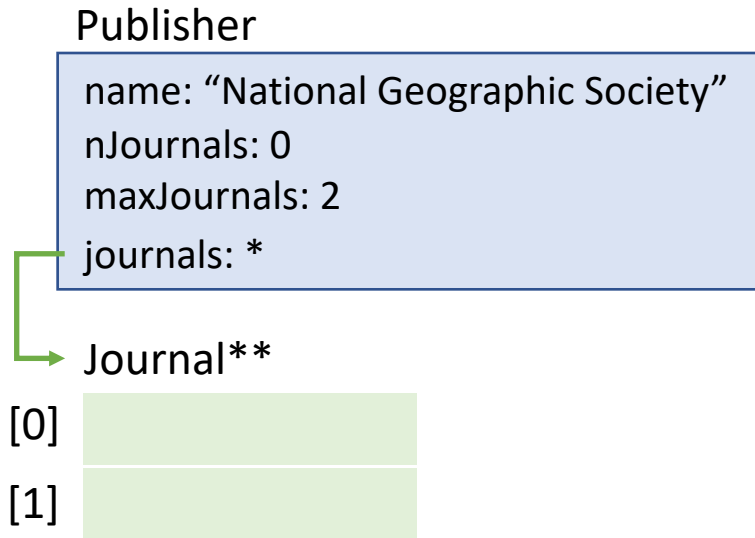
Data Model for Journals and Publisher

Publisher

name: "National Geographic Society"
nJournals: 0
maxJournals: 2
journals:

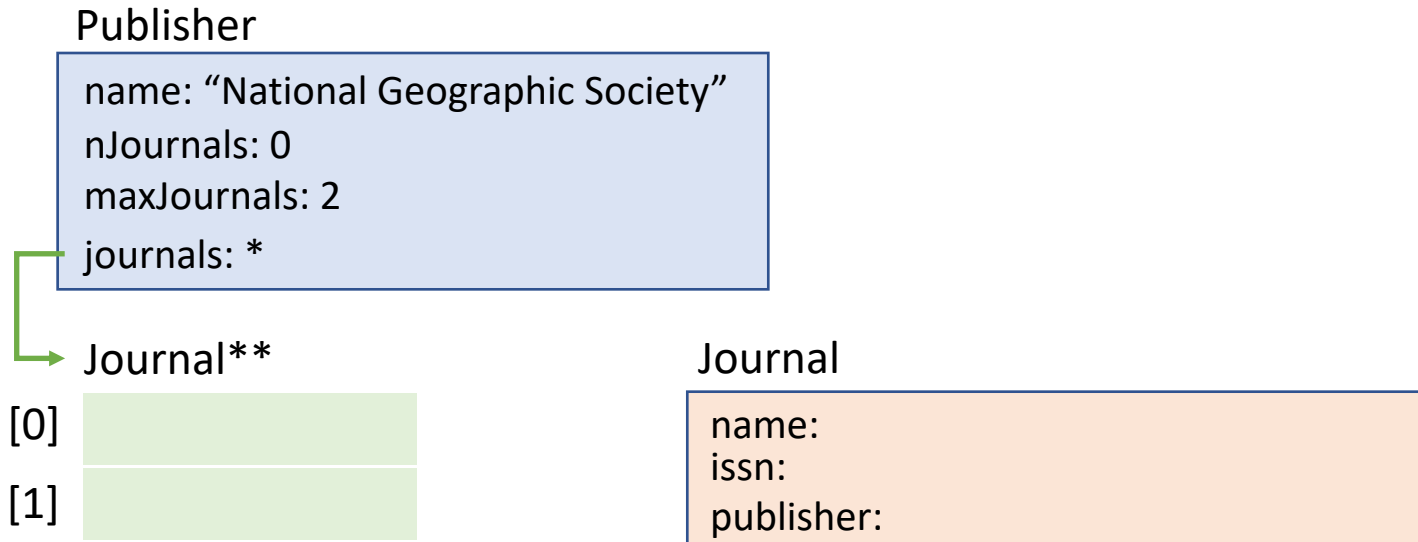
newPublisher: initialize Publisher fields

Data Model for Journals and Publisher



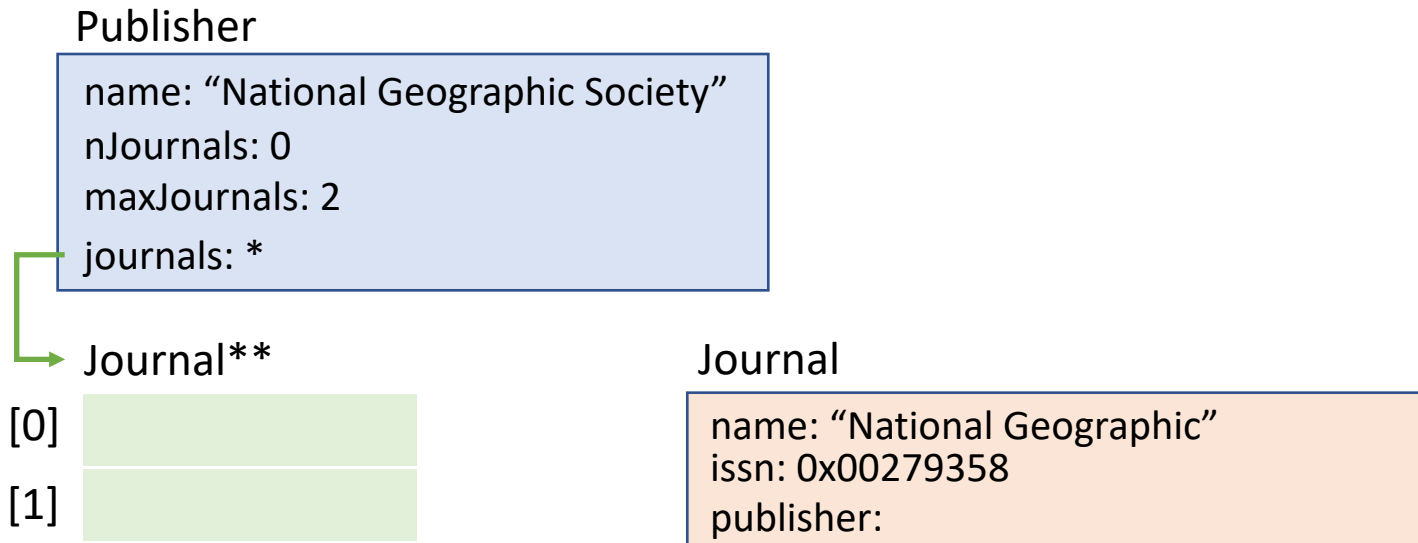
newPublisher: allocate and point to array of 2 Journal pointers (Journal**)

Data Model for Journals and Publisher



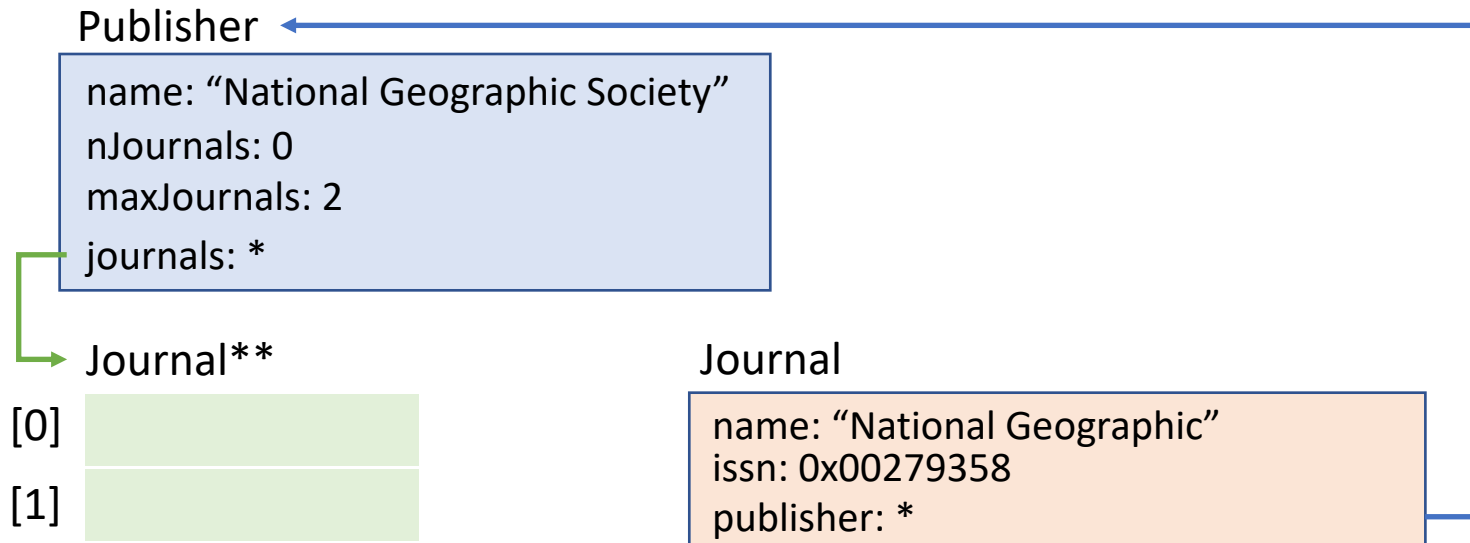
newJournal: allocate Journal

Data Model for Journals and Publisher



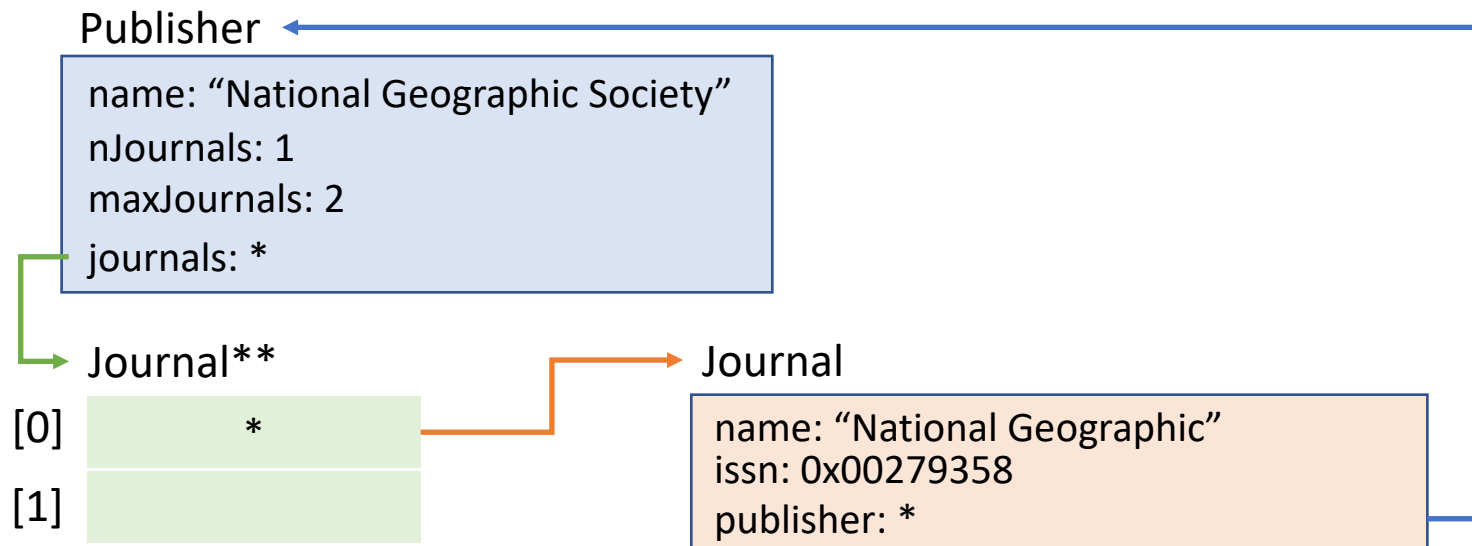
newJournal: initialize Journal fields

Data Model for Journals and Publisher



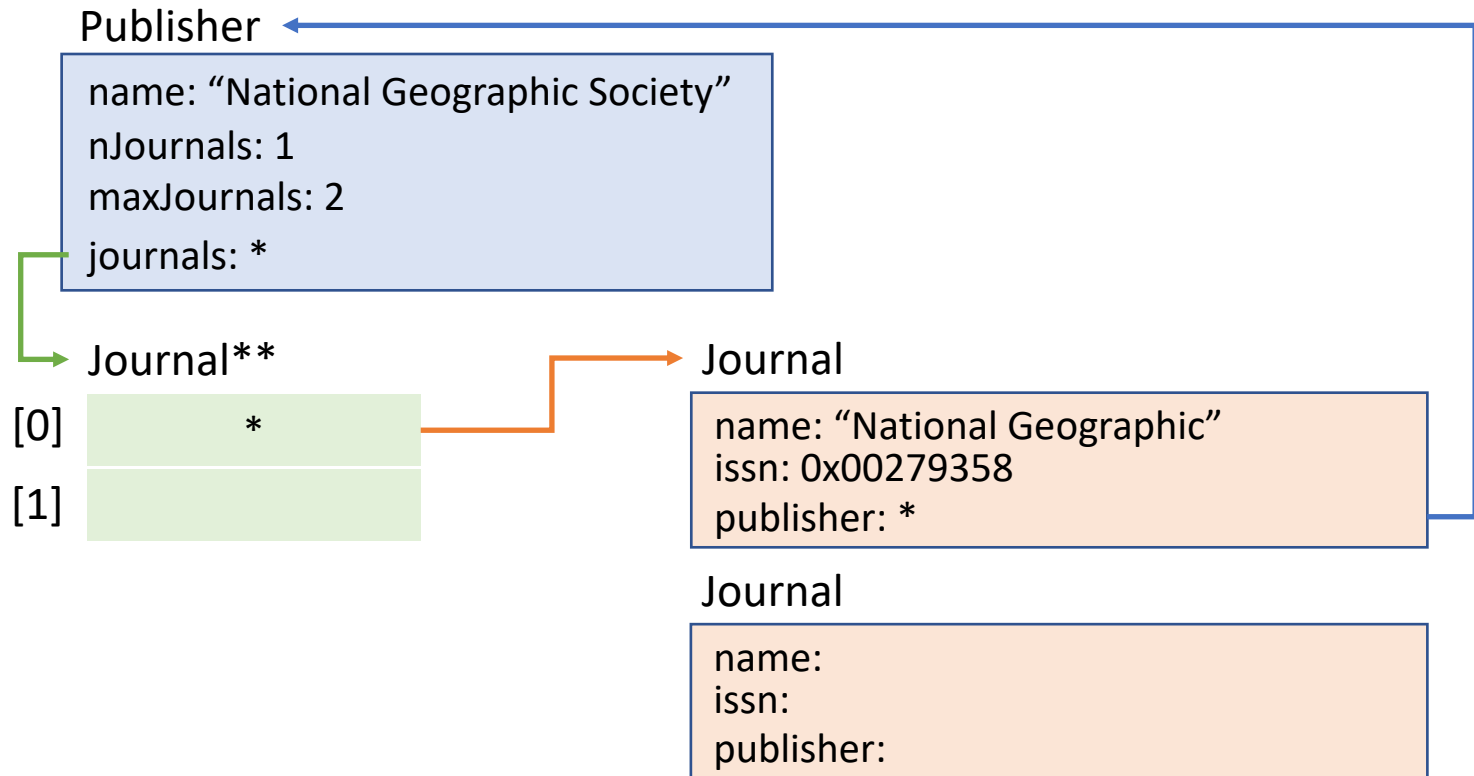
newJournal: link Journal to Publisher

Data Model for Journals and Publisher



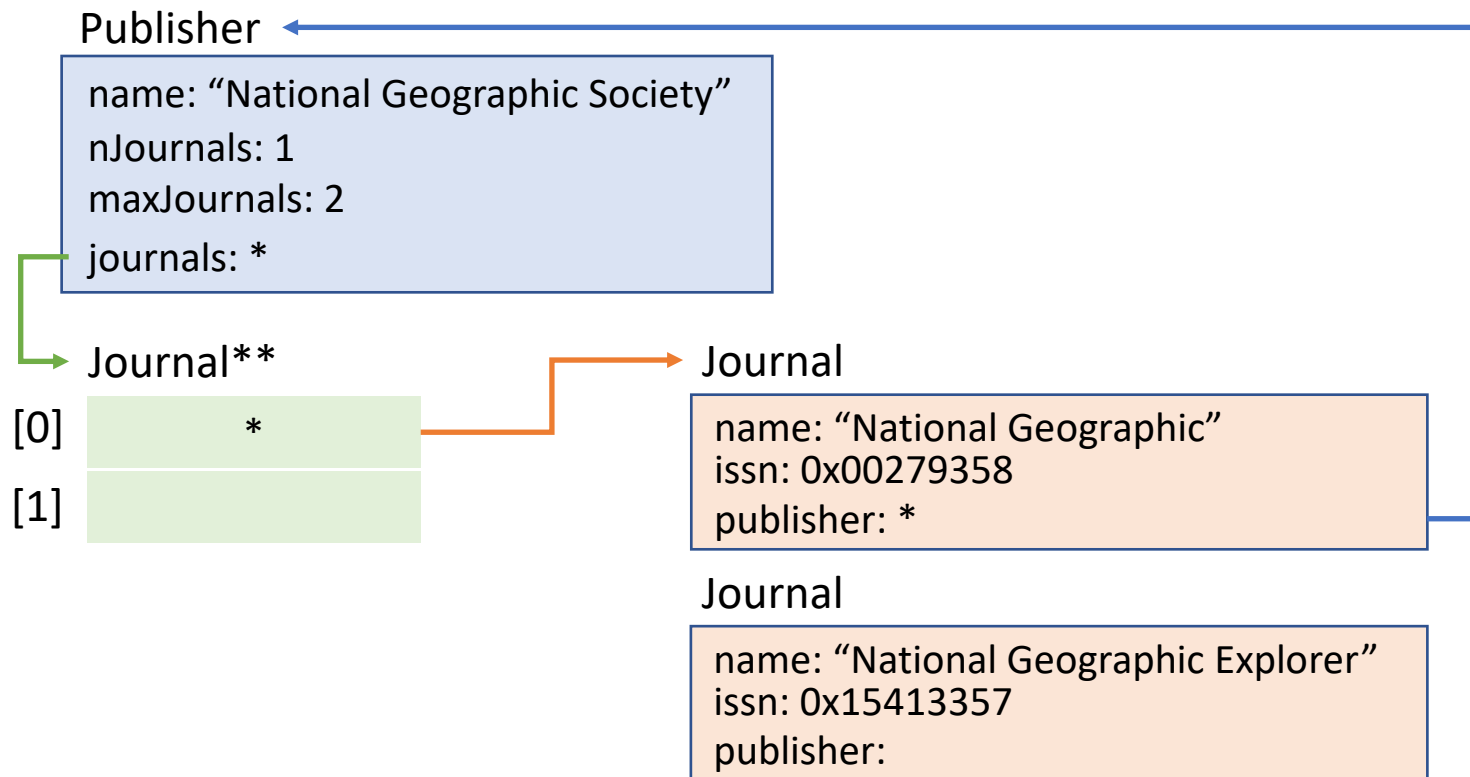
addJournalToPublisher: add Journal to journals array

Data Model for Journals and Publisher



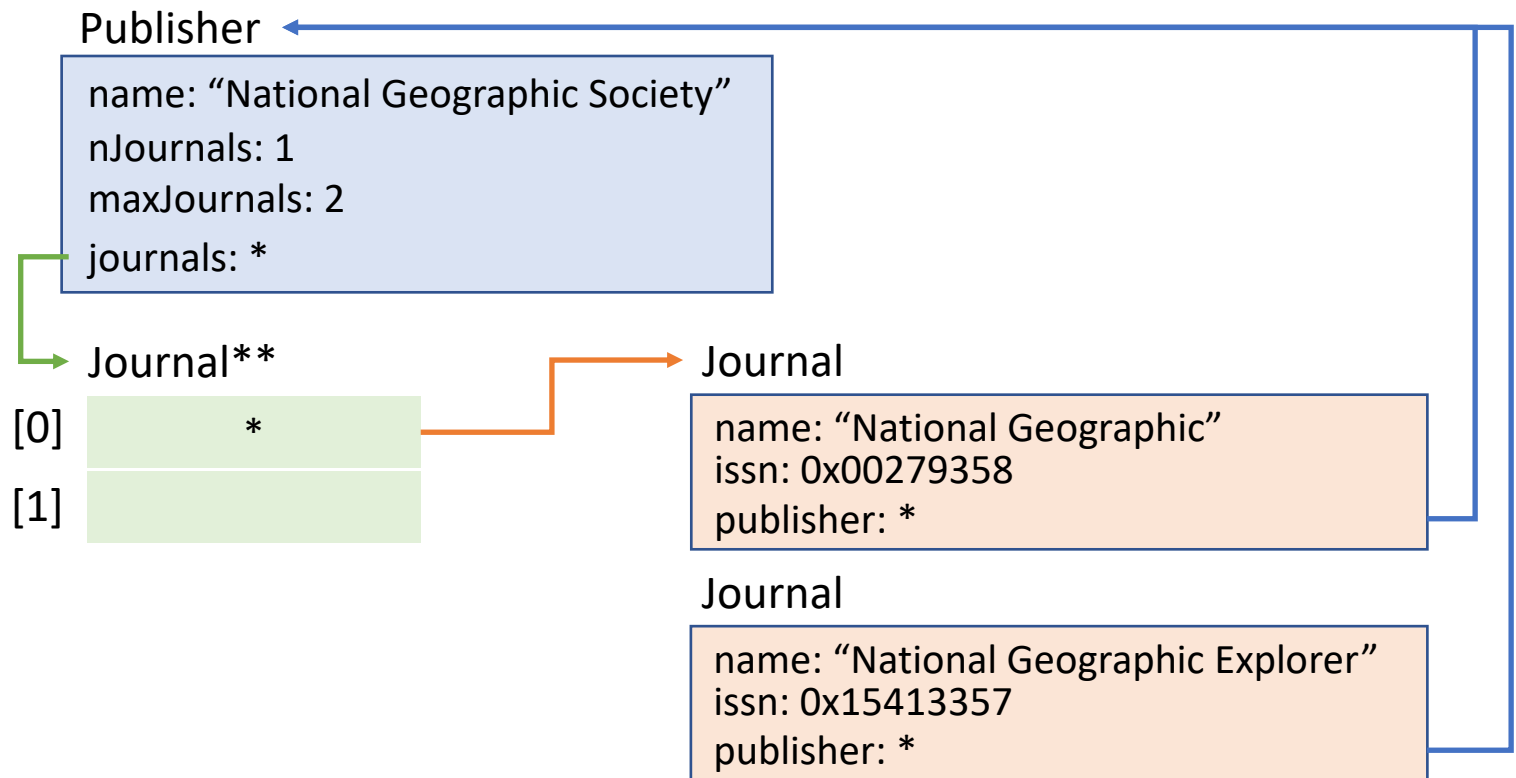
newJournal: allocate Journal

Data Model for Journals and Publisher



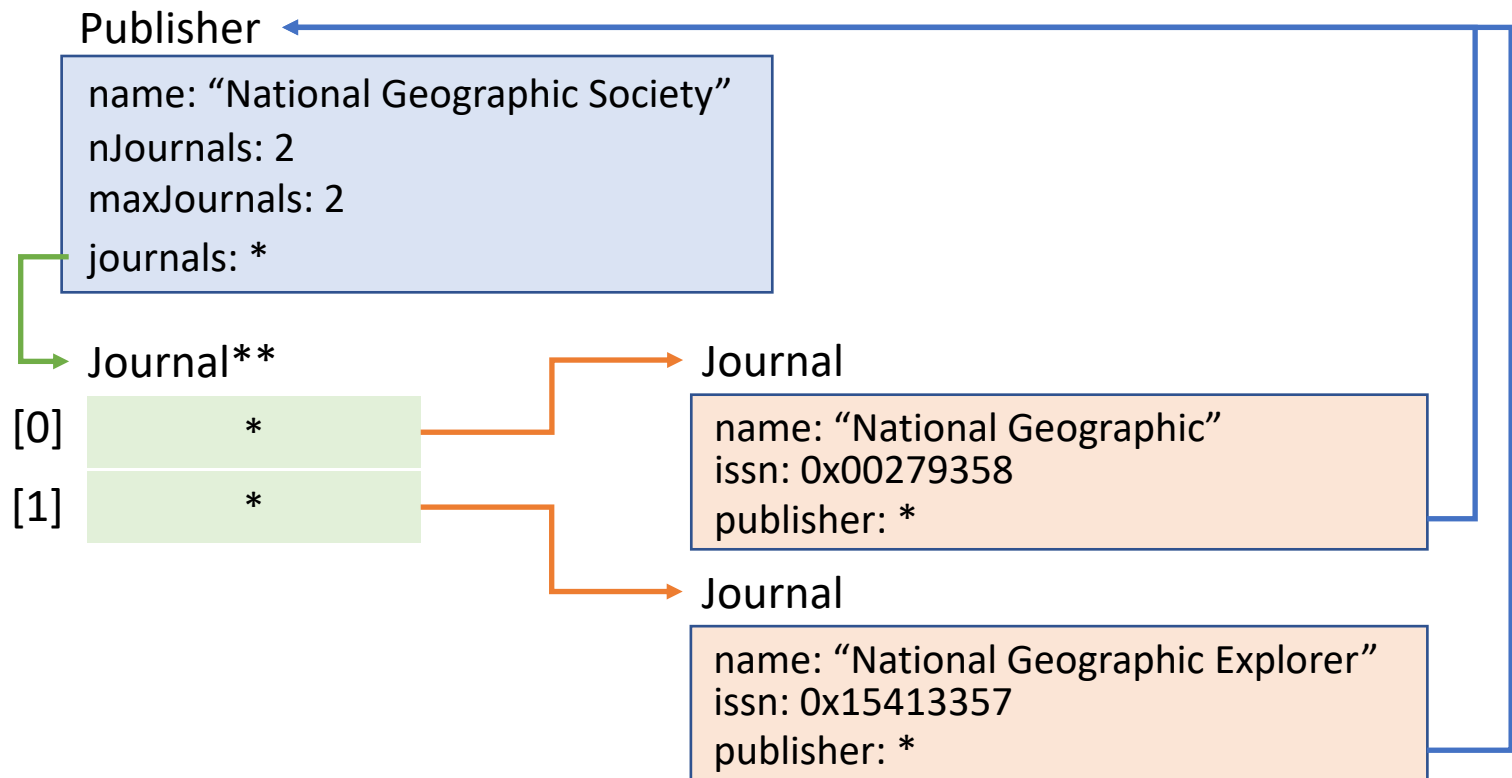
newJournal: initialize Journal fields

Data Model for Journals and Publisher



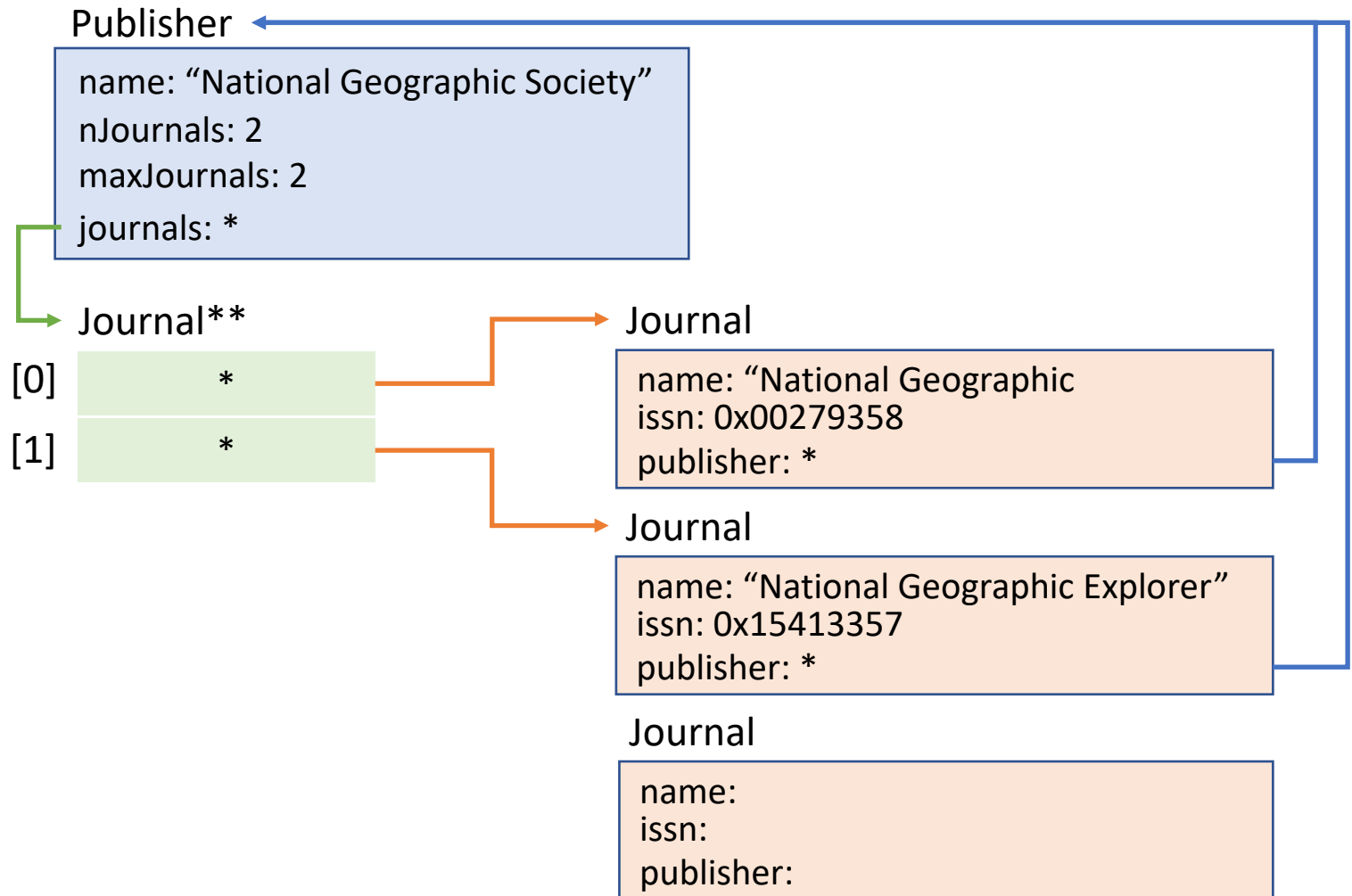
newJournal: link Journal to Publisher

Data Model for Journals and Publisher



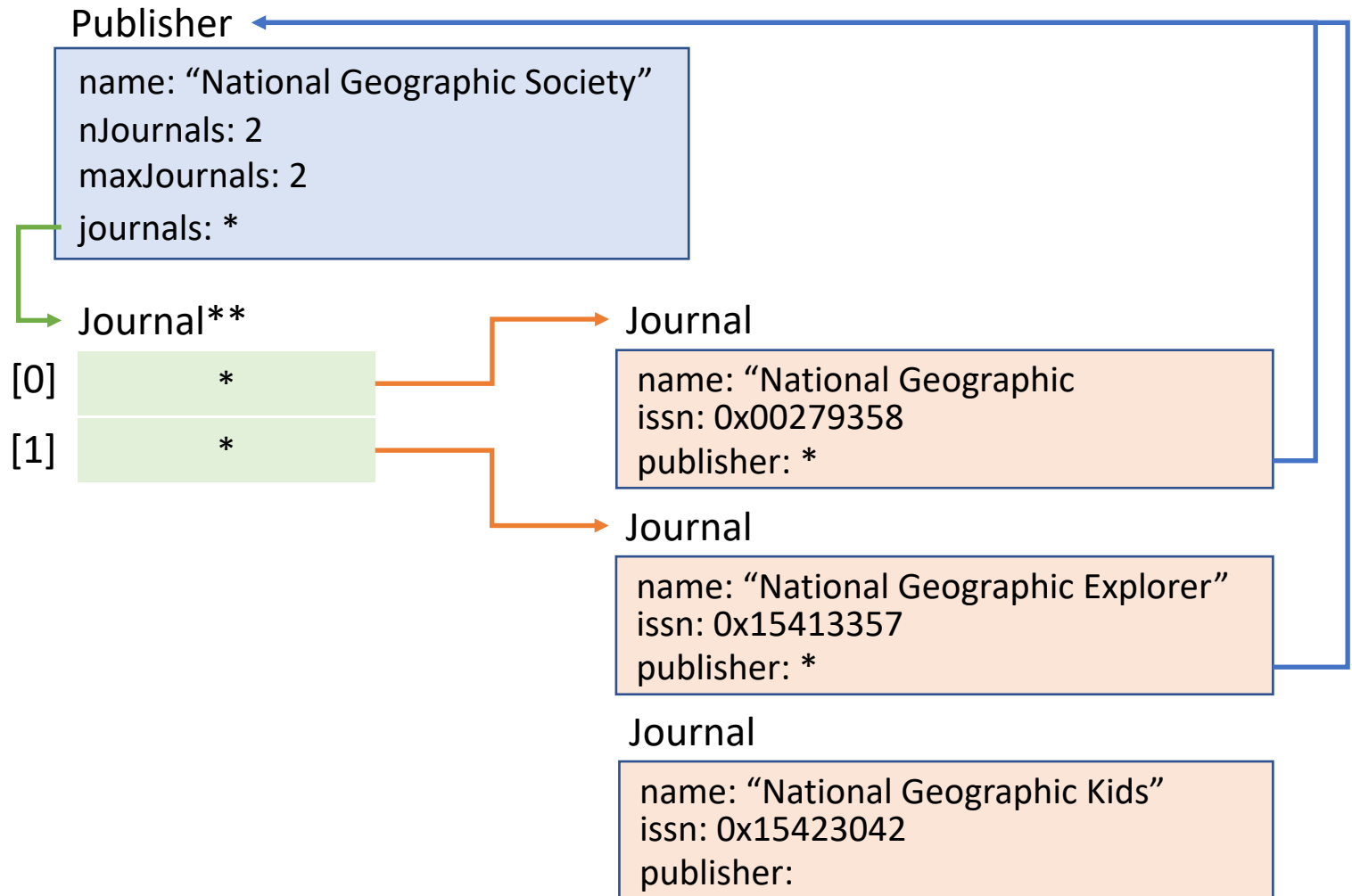
addJournalToPublisher: add Journal to journals array

Data Model for Journals and Publisher



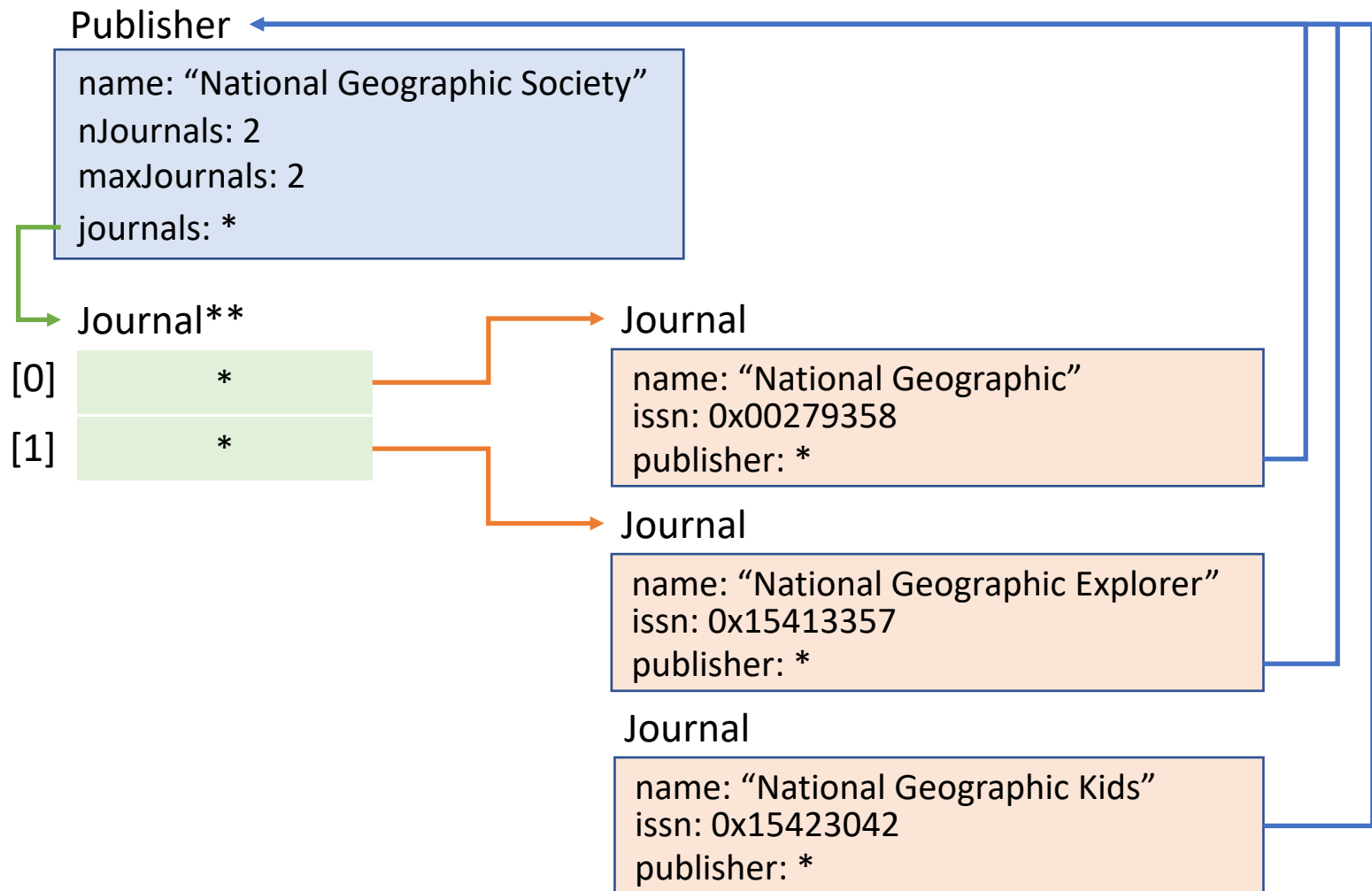
newJournal(): allocate Journal

Data Model for Journals and Publisher



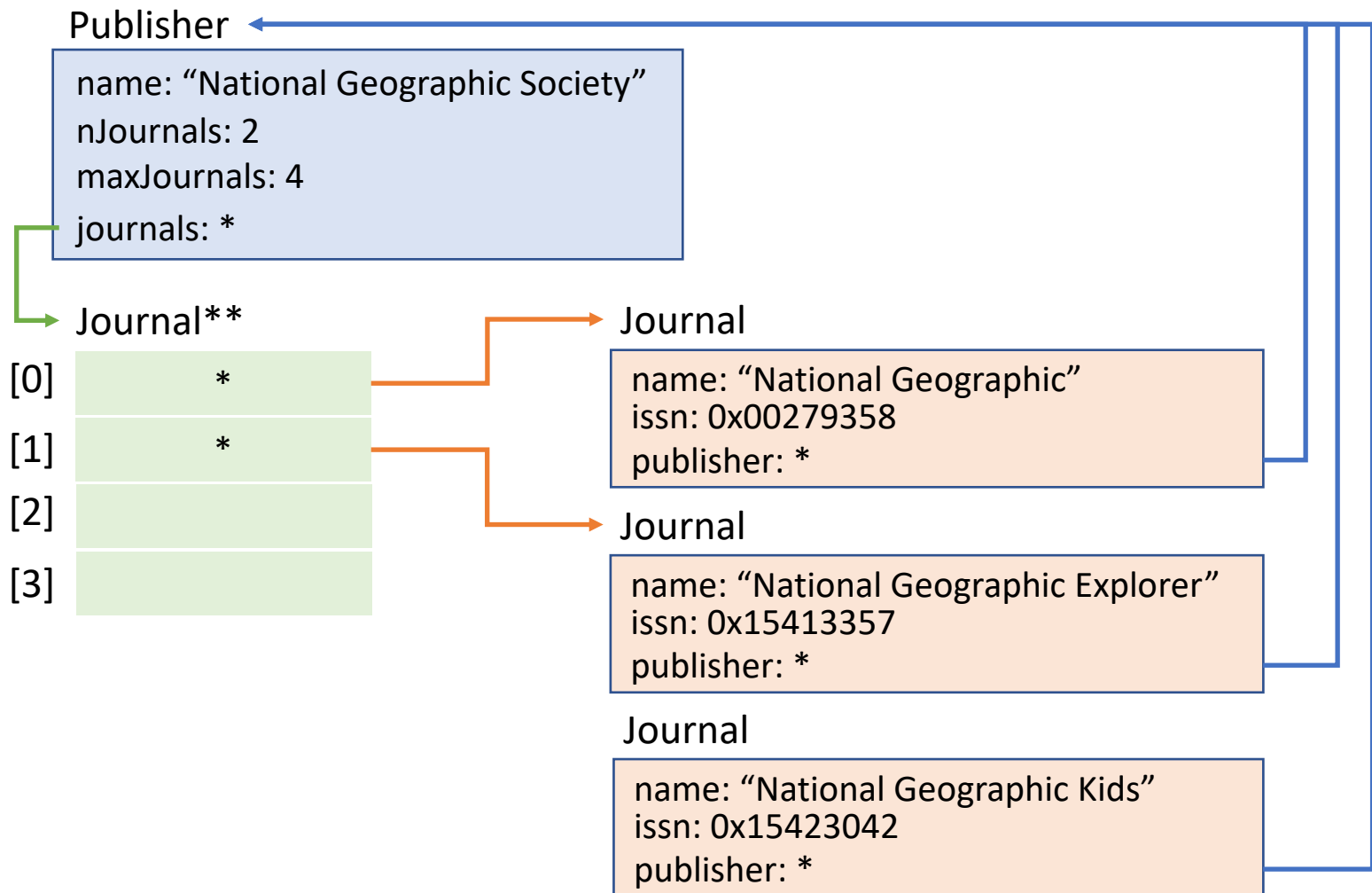
newJournal(): initialize Journal fields

Data Model for Journals and Publisher



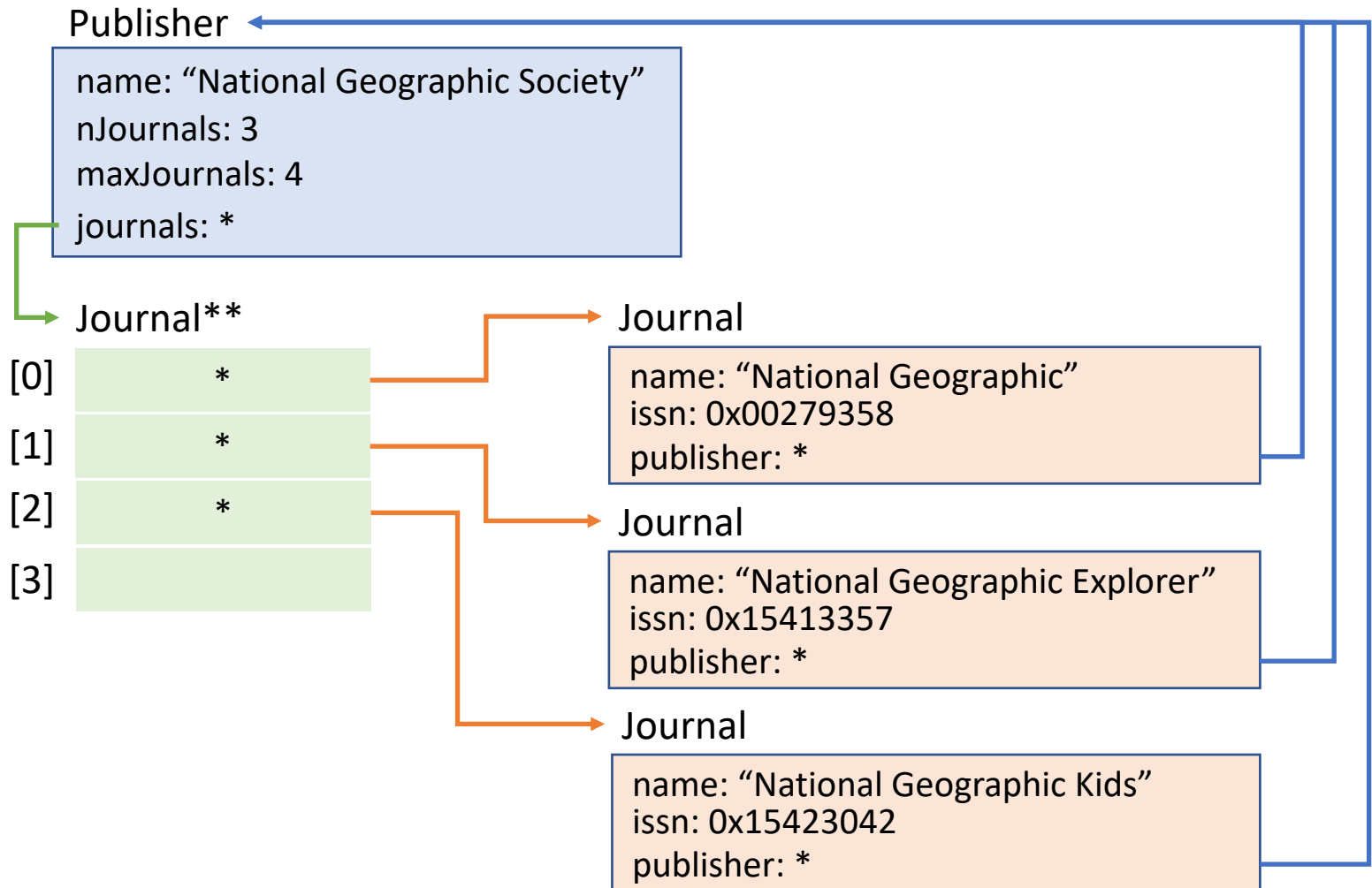
newJournal: link journal to Publisher

Data Model for Journals and Publisher



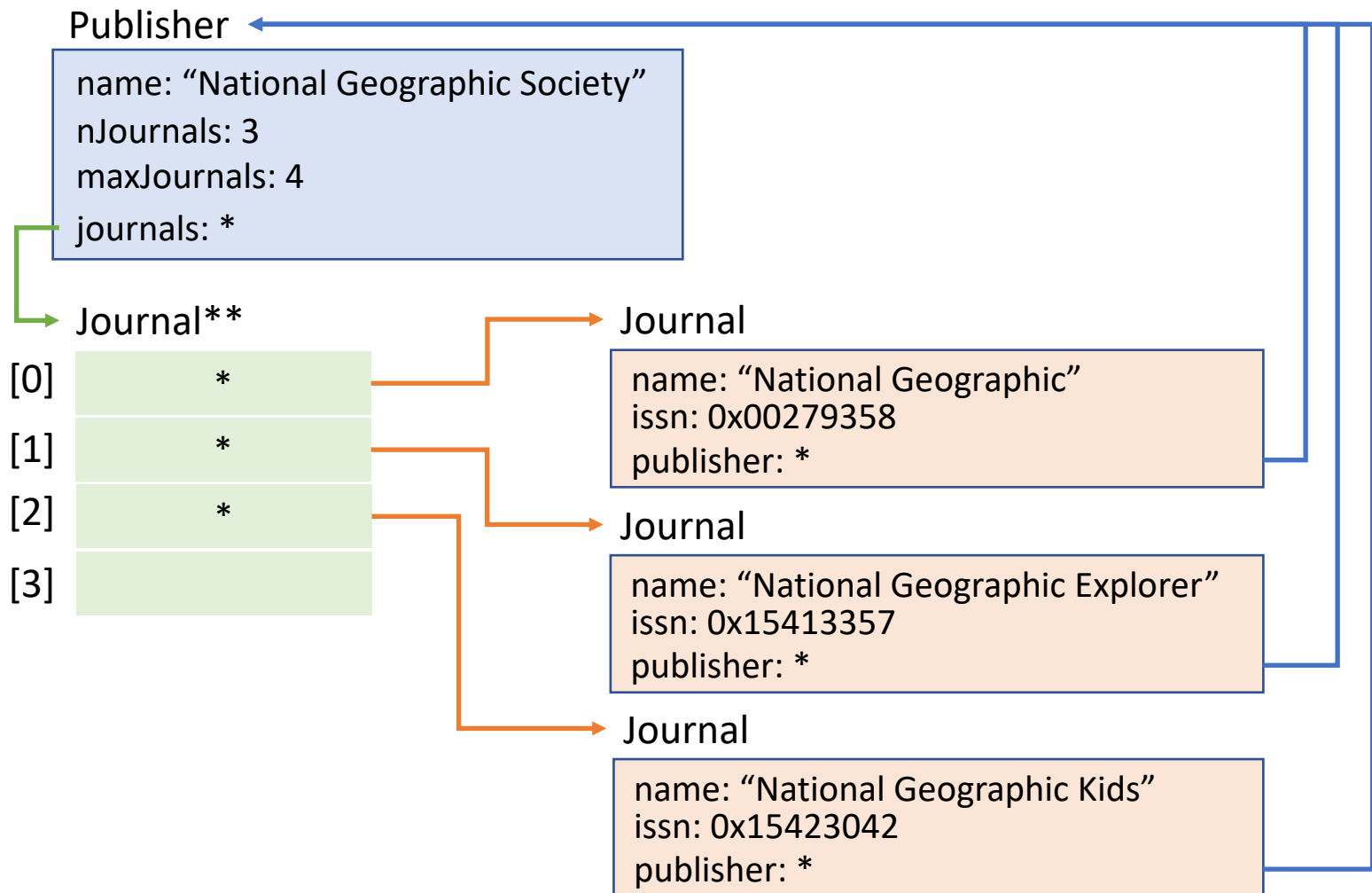
addJournalToPublisher: journals array full – realloc array

Data Model for Journals and Publisher



addJournalToPublisher: add Journal to journals array

Data Model for Journals and Publisher



main: finished creating Publisher and Journals