***SoftwareX* article template** *Version 4 (October 2024)*

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Now you are ready to fill in the template below. As you complete each section, please carefully read the associated instructions. All sections are mandatory, unless marked *optional*.

**Once you have completed the template, delete this line and everything above it before submitting your article. In addition, please delete the instructions in the template (the text written in italics).**

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# *Title (Name of your software: The a SHORT title)*

# *Names of authors / main developers (incl. affiliations, addresses, email)*

# Abstract

# *(ca. 100 words)*

# Keywords

# *(maximum of six)*

# Metadata

# *This ancillary data table is required for the sub-version of the codebase. Please replace the italicized text in the right column with the correct information about your current code and leave the left column untouched.*

|  |  |  |
| --- | --- | --- |
| **Nr** | **Code metadata description** | ***Metadata*** |
| C1 | Current code version | *For example: v42* |
| C2 | Permanent link to code/repository used for this code version | *For example:* [*https://github.com/mozart/mozart2*](https://github.com/mozart/mozart2)*. Please note that a GitHub repository is mandatory.* |
| C3 | Permanent link to reproducible capsule | *For example:* [*https://codeocean.com/capsule/0270963/tree/v1*](https://codeocean.com/capsule/0270963/tree/v1) |
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| C5 | Code versioning system used | *For example: svn, git, mercurial, etc. (put ‘none’ if none used)* |
| C6 | Software code languages, tools and services used | *For example: C++, python, r, MPI, OpenCL, etc.* |
| C7 | Compilation requirements, operating environments and dependencies |  |
| C8 | If available, link to developer documentation/manual | *For example:* [*http://mozart.github.io/documentation/*](http://mozart.github.io/documentation/) |
| C9 | Support email for questions |  |

Your main body of text (Sections 1-5 below) should be a maximum 6 pages in total (excluding metadata, tables, figures, references) with a 3000-word limit (we ask that more priority is placed on the word limit versus the page count). Though we strictly insist on the author following the template, in exceptional circumstances, we can be flexible with the page numbers and word limit. In such cases, it should be discussed with the managing editor or publisher prior to submission. All queries regarding the same can be reached at [softwarex@elsevier.com](mailto:softwarex@elsevier.com).

# Motivation and significance

# *In this section, we want you to introduce the scientific background and the motivation for developing the software.*

# *Explain why the software is important and describe the exact (scientific) problem(s) it solves.*

# *Indicate in what way the software has contributed (or will contribute in the future) to the process of scientific discovery; if available, please cite a research paper using the software.*

# *Provide a description of the experimental setting. (How does the user use the software?)*

# *Introduce related work in literature (cite or list algorithms used, other software etc.).*

# Software description

*Describe the software. Provide enough detail to help the reader understand its impact.*

# Software architecture*:*

# *Give a short overview of the overall software architecture; provide a pictorial overview where possible; for example, an image showing the components. If necessary, provide implementation details.*

# Software functionalities*:*

# *Present the major functionalities of the software.*

# Sample code snippets analysis (optional).

# Illustrative examples

*Provide at least one illustrative example to demonstrate the major functions of your software/code.**OPTIONAL:* *you may include one explanatory video or screencast that will appear next to your article, in the right hand side panel. Please upload any video as a single supplementary file with your article. Only one MP4 formatted, with 150MB maximum size, video is possible per article. Recommended video dimensions are 640 x 480 at a maximum of 30 frames / second. Prior to submission please test and validate your .mp4 file at \url{http://elsevier-apps.sciverse.com/GadgetVideoPodcastPlayerWeb/verification} . This tool will display your video exactly in the same way as it will appear on ScienceDirect.*

1. **Impact**

*This is the main section of the article and reviewers will weight it appropriately.*

*Please indicate:*

# *Any new research questions that can be pursued as a result of your software.*

# *In what way, and to what extent, your software improves the pursuit of existing research questions.*

# *Any ways in which your software has changed the daily practice of its users.*

# *How widespread the use of the software is within and outside the intended user group (downloads, number of users if your software is a service, citable publications, etc).*

# *How the software is being used in commercial settings and/or how it has led to the creation of spin-off companies.*

*Please note that points 1 and 2 are best demonstrated by references to citable publications.*

# Conclusions

**Acknowledgements**

*Optional. You can use this section to acknowledge colleagues who don’t qualify as a co-author but helped you in some way.*

# References

*If the software repository you used supplied a DOI or another Persistent IDentifier (PID), please add a reference for your software here. For more guidance on software citation, please see our guide for authors or this* [*article on the essentials of software citation*](https://f1000research.com/articles/9-1257/v2) *by FORCE 11, of which Elsevier is a member.*

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***the instructions in this document (the text in italics),***

***including this paragraph.***

***Thank you!***