



Teaching Medical Terminology with Mind-mapping Software



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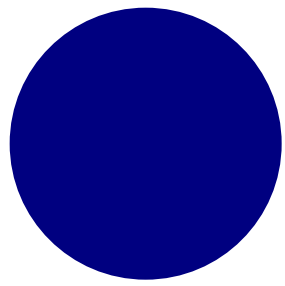
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Context

- In Saudi Arabia, Arabic is the medium of instruction in humanities colleges, whereas English is the medium of instruction in colleges of medicine and engineering.
- Premedical students take English for medical purposes and foundation courses such as biology and biochemistry in English.



Difficulties with Medical Terminology

- They encounter too many technical terms with which they are unfamiliar;
- Difficulty in pronouncing;
- Recognizing the component parts of terms;
- What each part means;
- Recognizing and distinguishing derivatives of a term;
- Singular and plural forms.
- Medical abbreviations and acronyms;



Aims of Study

- To show how mind-mapping software can be used to help premedical students learn, retain and connect medical terminology.
- To show how the mind-mapping software can be used to combine prefixes, suffixes, roots.
- Classify & group terms according to prefixes, roots or suffixes, some category.

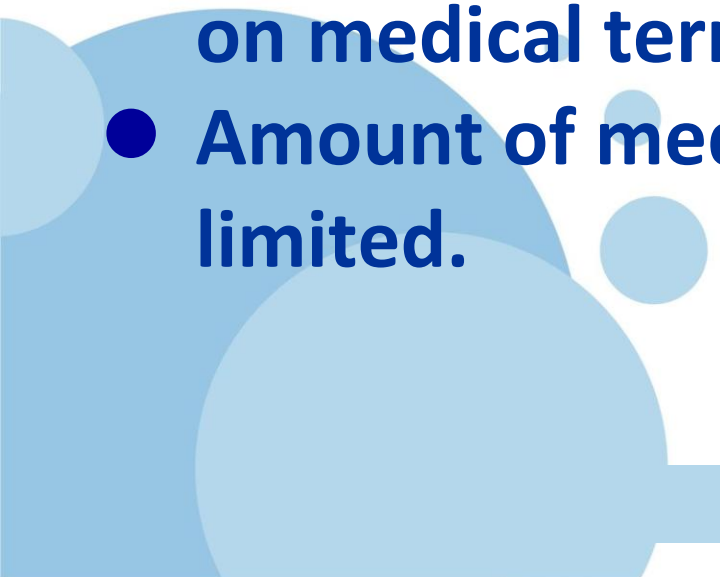


What is a mind-map?

- A mind-map is a graphic organizer.
- It begins with placing a target concept or category in the middle of the screen.
- Nodes and branches radiate from the central concept.
- Sub-categories, examples and words are grouped into sub-categories and placed radiating out from the central concept/category.



Curriculum, Tasks & Materials

- English for medical purposes course = 8 hrs per week
 - Reading, grammar and medical terminology.
 - Materials developed in-house,
 - Few chapters selected from published books on medical terminology.
 - Amount of medical terms covered is too limited.
- 



Skills Emphasized

- Basic structure of medical terms.
- Prefixes and Suffixes added to Latin bases
- Affixes referring to quantity.
- Negative prefixes
- Derivatives sharing the same base.
- Opposites such as: interior ≠ exterior;.
- Latin singular and plural forms.
- Medical acronyms and abbreviations.



Instructional Strategy with FreeMind

Orientation



Presentation & modeling



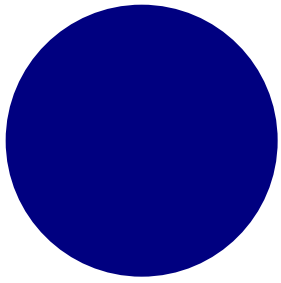
Guided Practice



Independent Practice

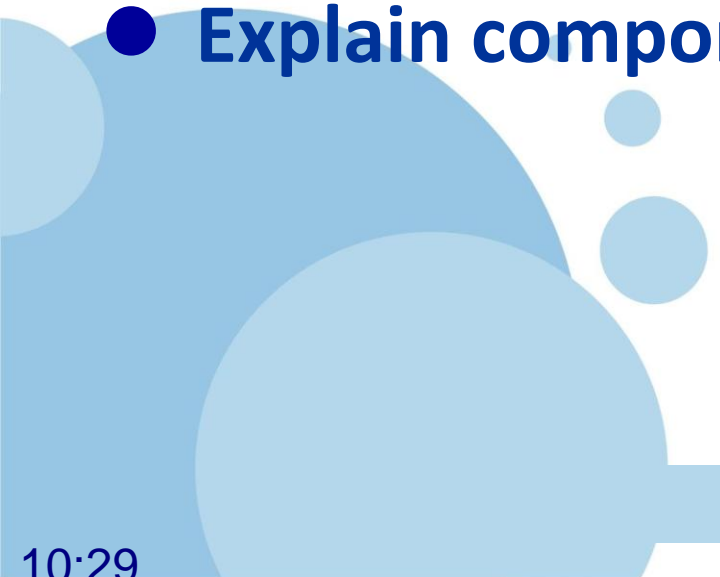


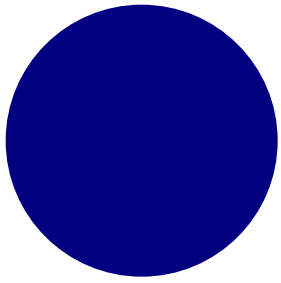
Assessment



Orientation

- **Students are introduced to the mind-mapping software and purposes of using it.**
- **They download FreeMind 0.8.1 from the internet free of charge.**
- **Explain components of the FreeMind 0.8.1**

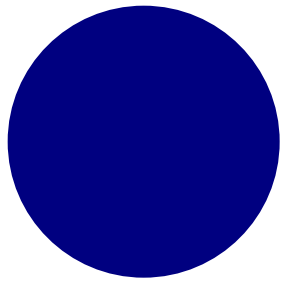




Presentation and Modeling

- The instructor trains students to use the Free Mind Software using an LCD projector.
- The software is used to create mind maps for the medical terms to be covered or those that have been covered.





Types of Min-maps

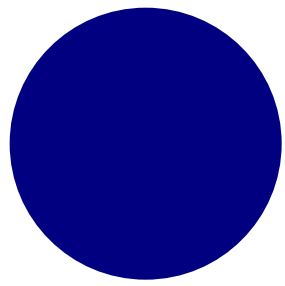
Phonological

morphological

syntactic

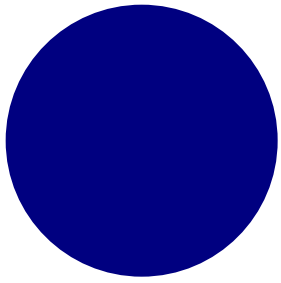
semantic





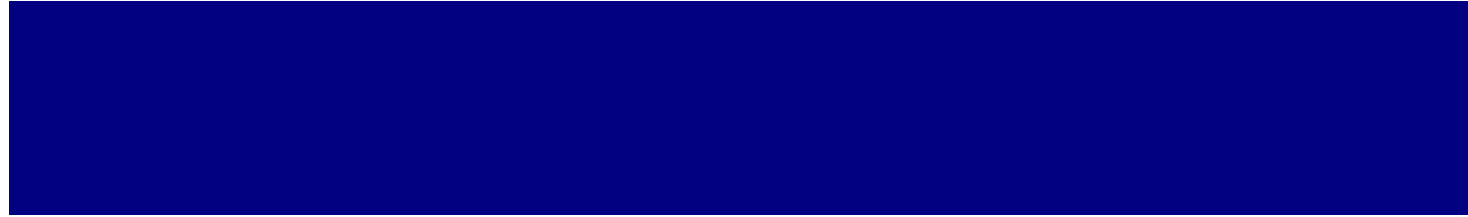
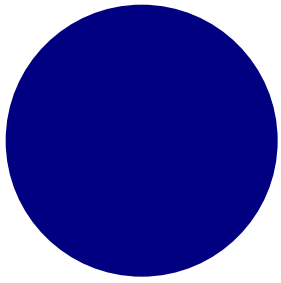
Guided Practice

- **Students practice connecting new medical terms studied in class with medical terms they already know.**
- **They keep their phonological, morphological, syntactic, and semantic mind maps and continue to add sub-categories and terms to each map.**
- **They make terminology lists and add terms related to each mind map.**



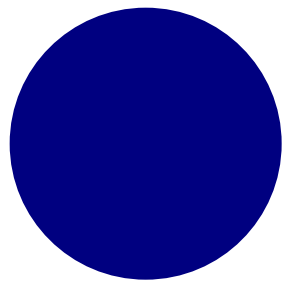
Independent Practice

- **The students continue to use Free Mind at home and continue to add terms related to each.**
- **The students are handed out questions that require them to group, classify or connect medical terms on their own based on new semantic, syntactic, phonic, phonological or morphological categories.**



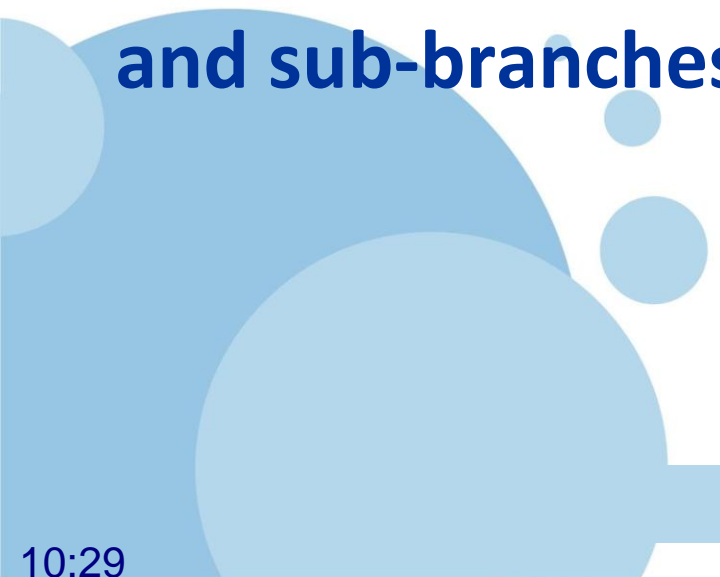
- **Students keep their medical terminology mind maps.**
- **Mind maps can be also posted in an online course.**
- **Students can exchange mind maps and can work on mind maps individually, in pairs, or in small groups.**
- **Extra credit is given for created mind maps.**





Assessment

- **Mind maps with a central focus and blank nodes, branches and sub-branches can be given to the student.**
- **The students are asked to fill in nodes, branches and sub-branches.**

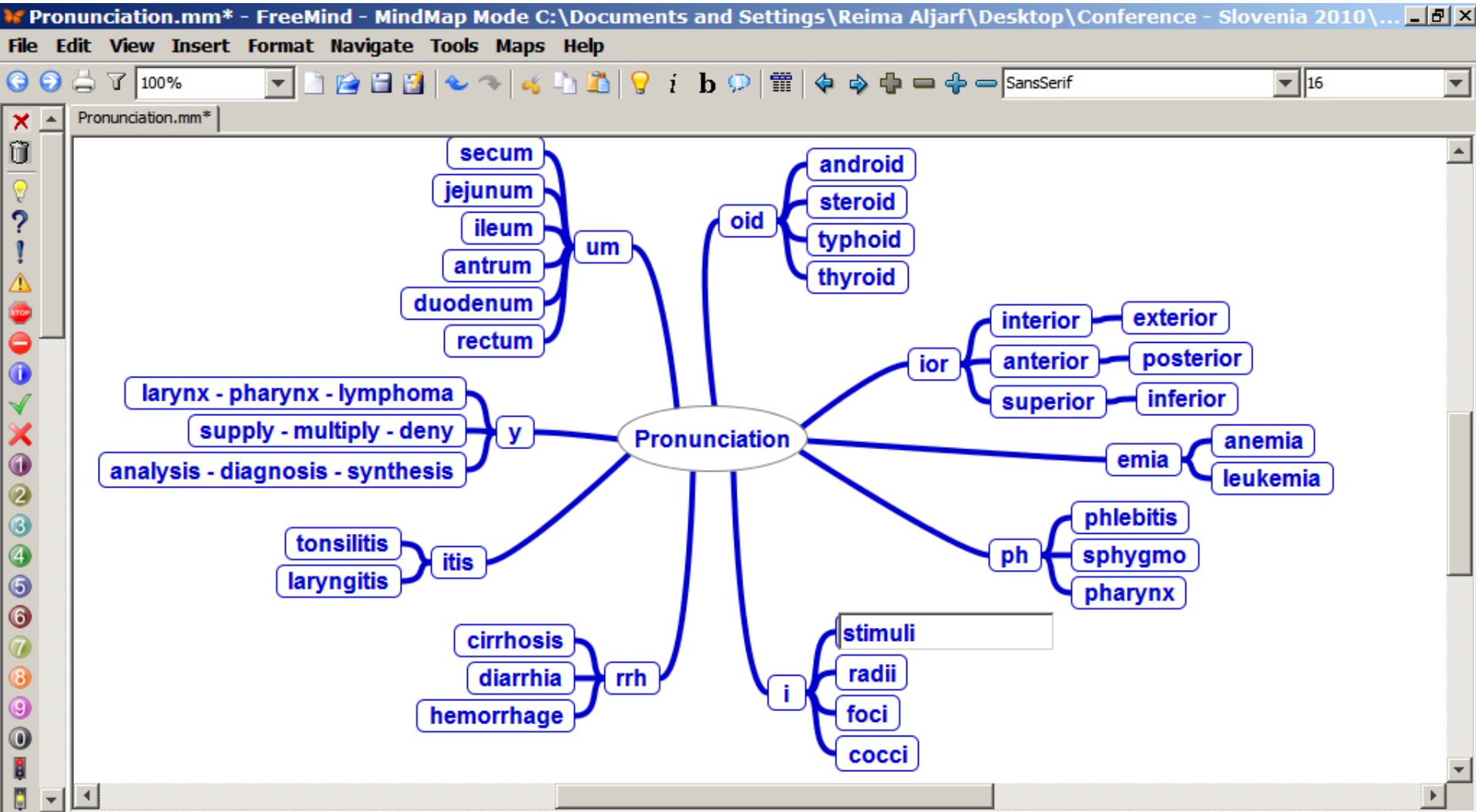




Recommendations

- Mind mapping strategies have been reported to improve word and concept knowledge across grade levels, in a variety of subjects and a variety of learners.
- The aim of the mind mapping activity is not to teach the students how to apply the details of the *Free Mind*.
- Focus should be on placing a category in the center, adding branches, pictures and changing font color, size and case.

Pronunciation Mindmap



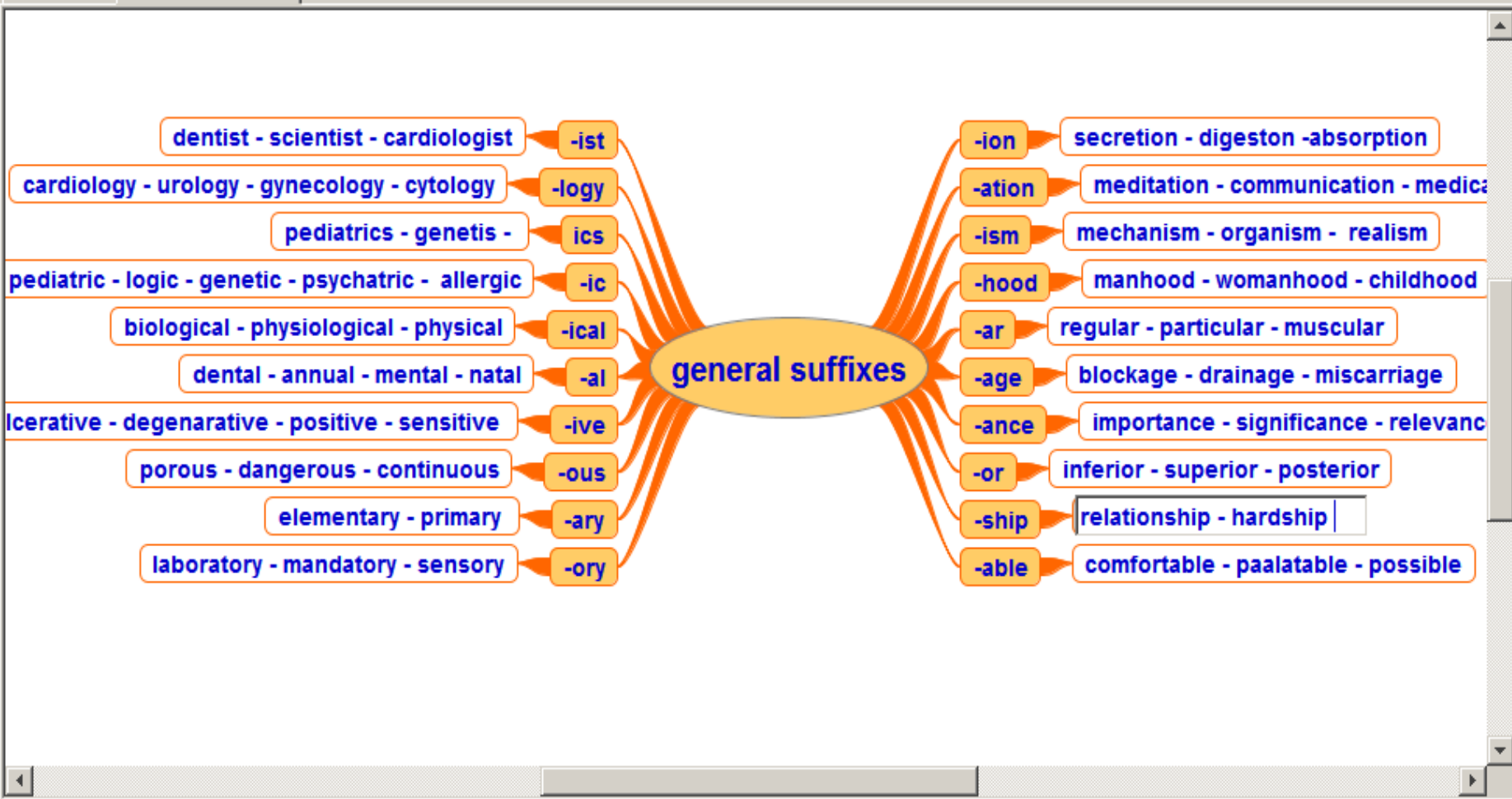
Morphological Min-map

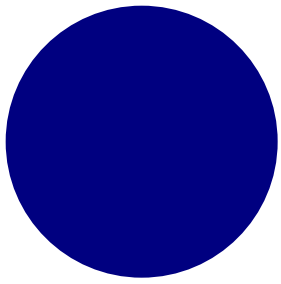
General Suffixes.mm* - FreeMin

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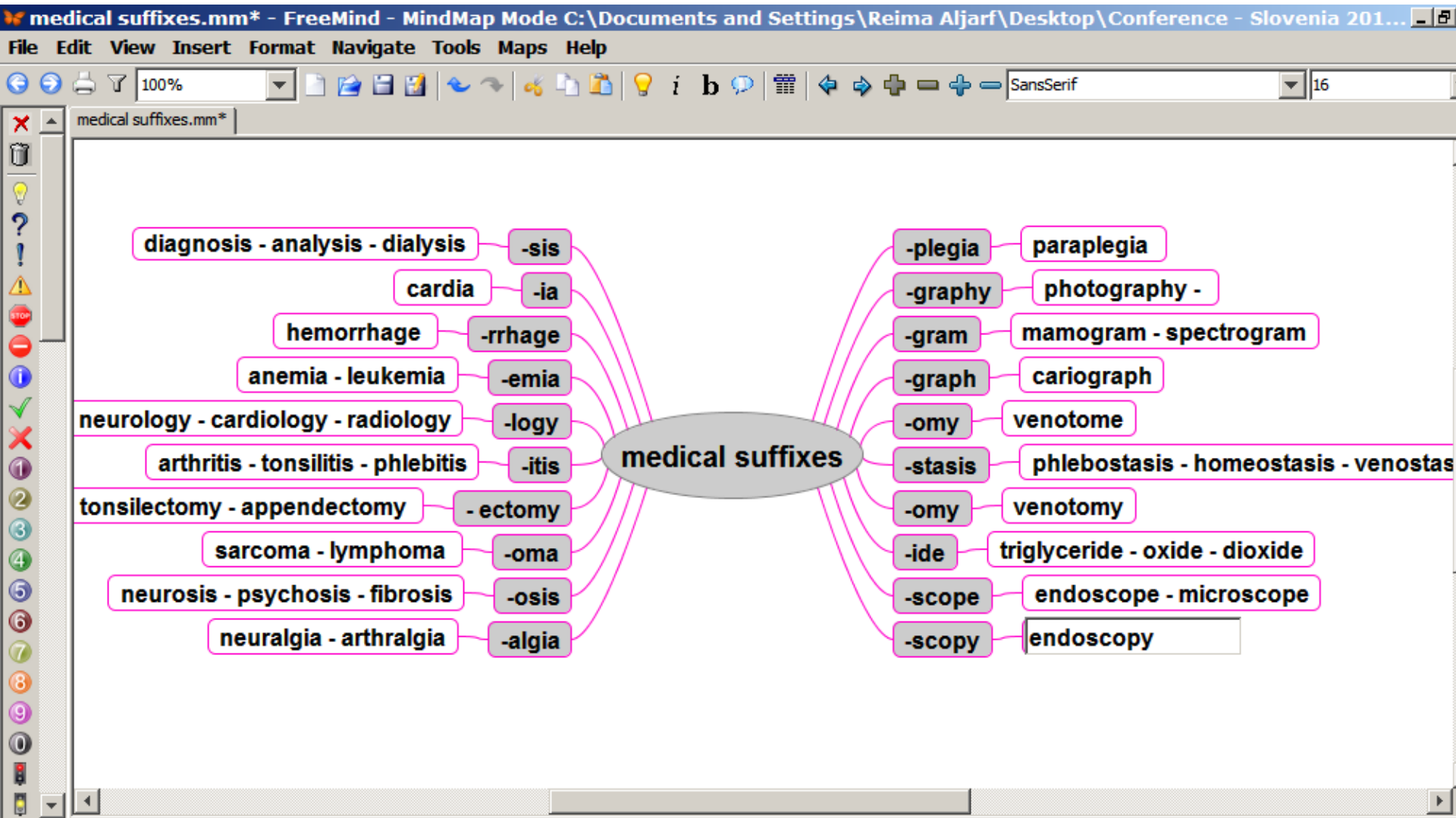
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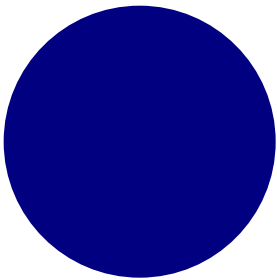
suffixes.mm* General Suffixes.mm*



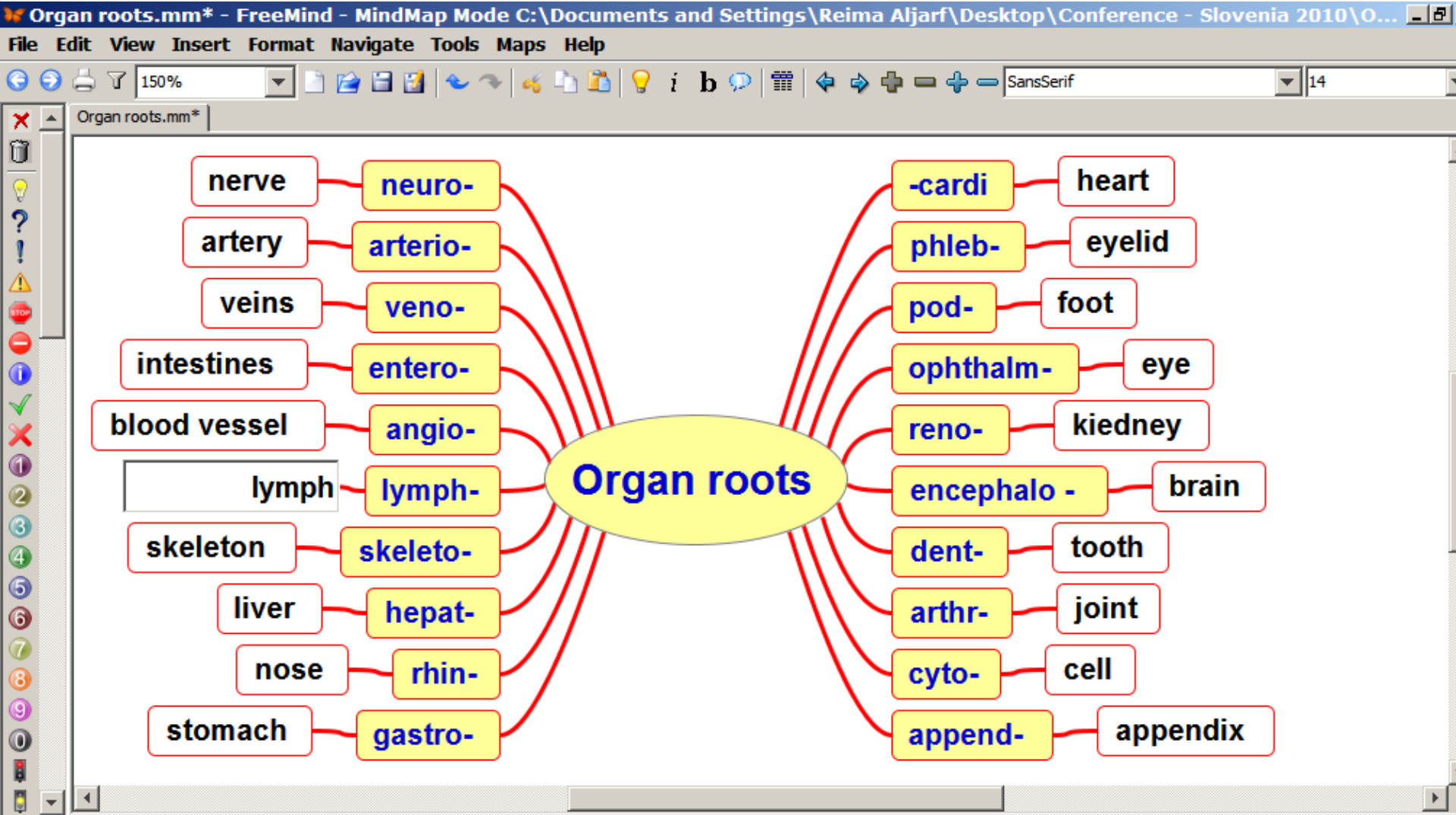


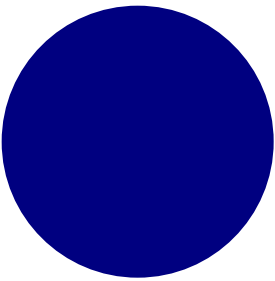
Morphological mind-map



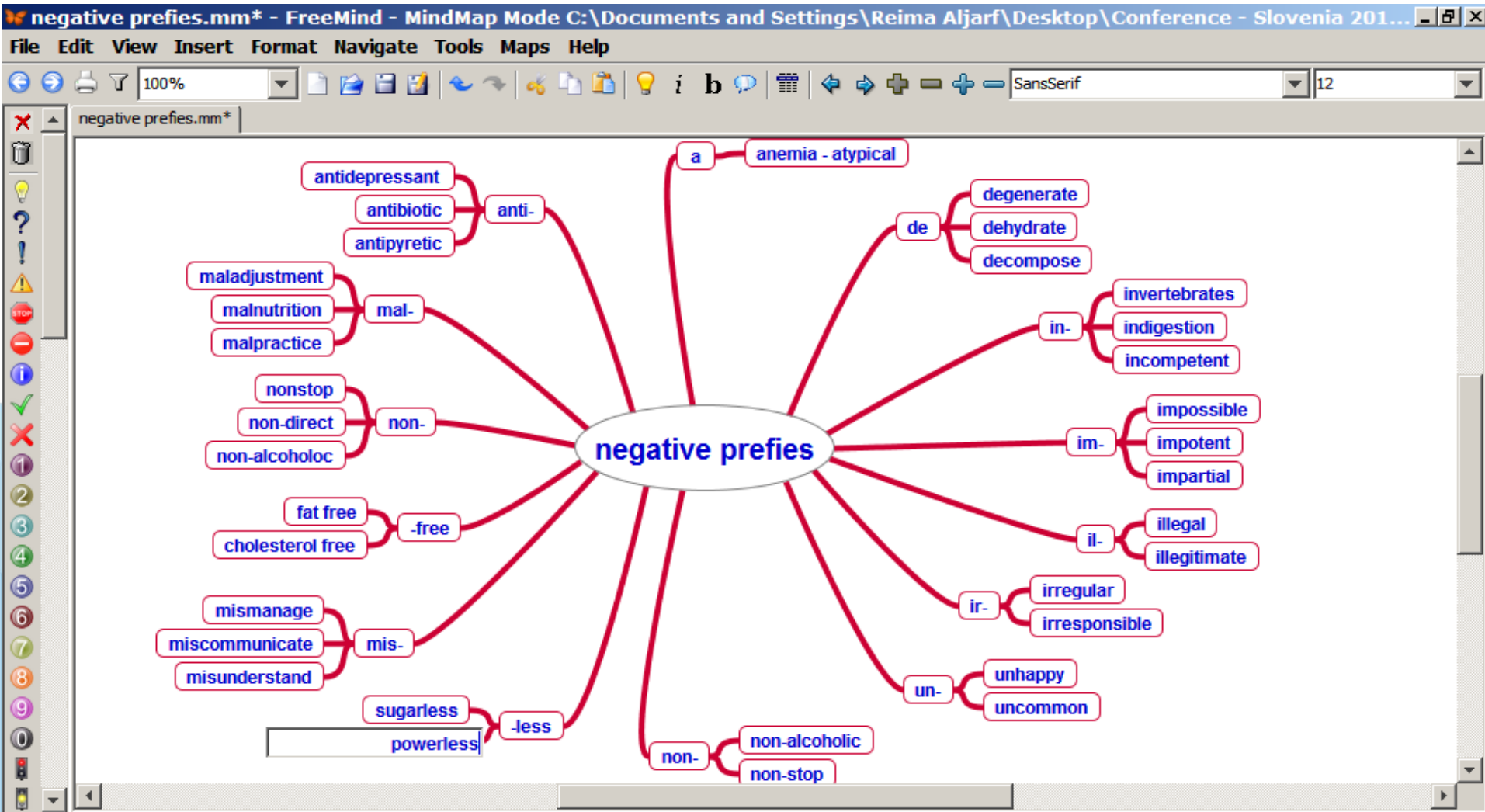


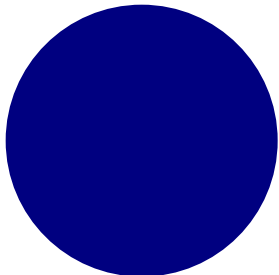
morphological mind-map



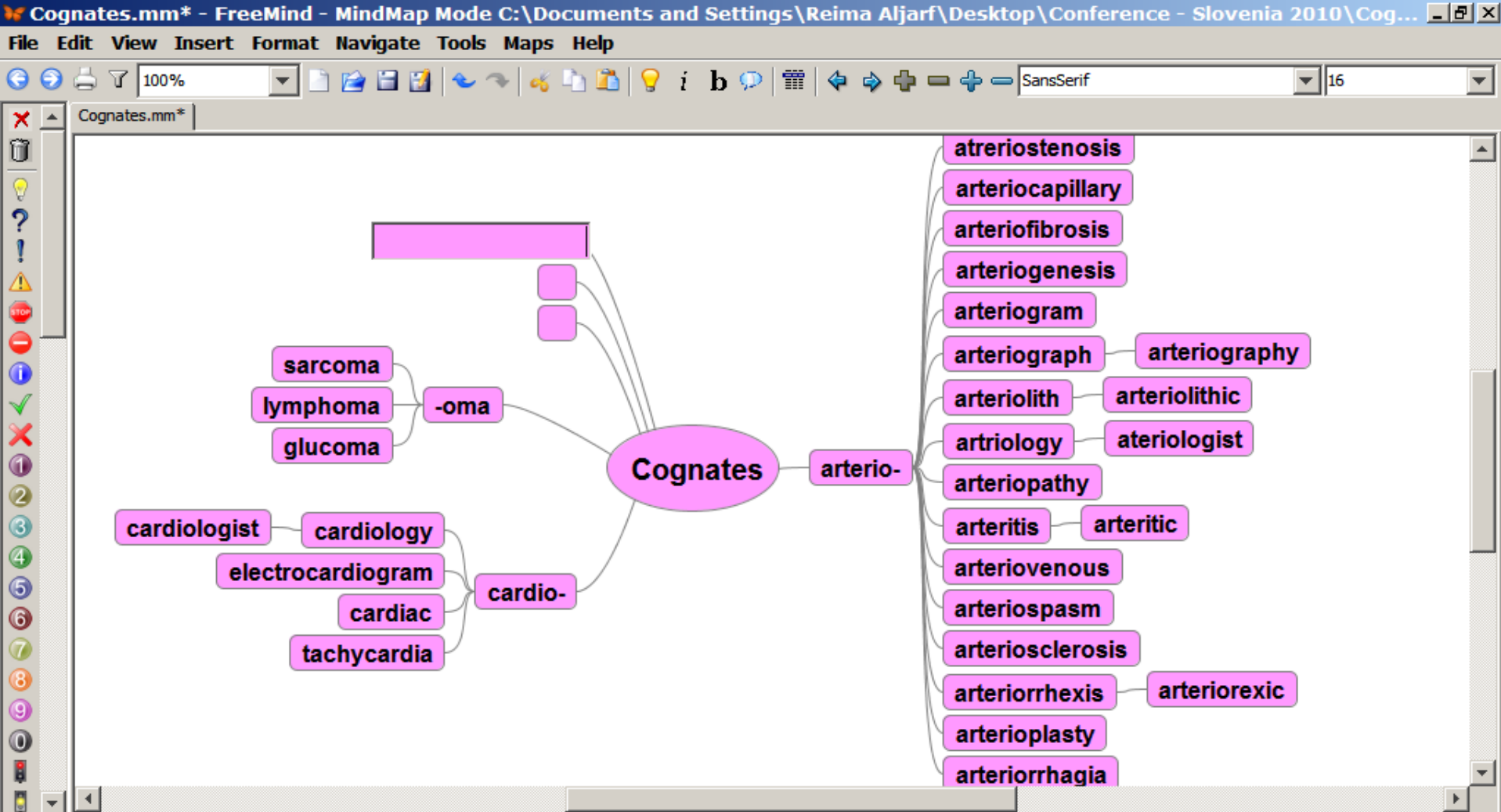


Morphological min-map





Syntactic mind-map

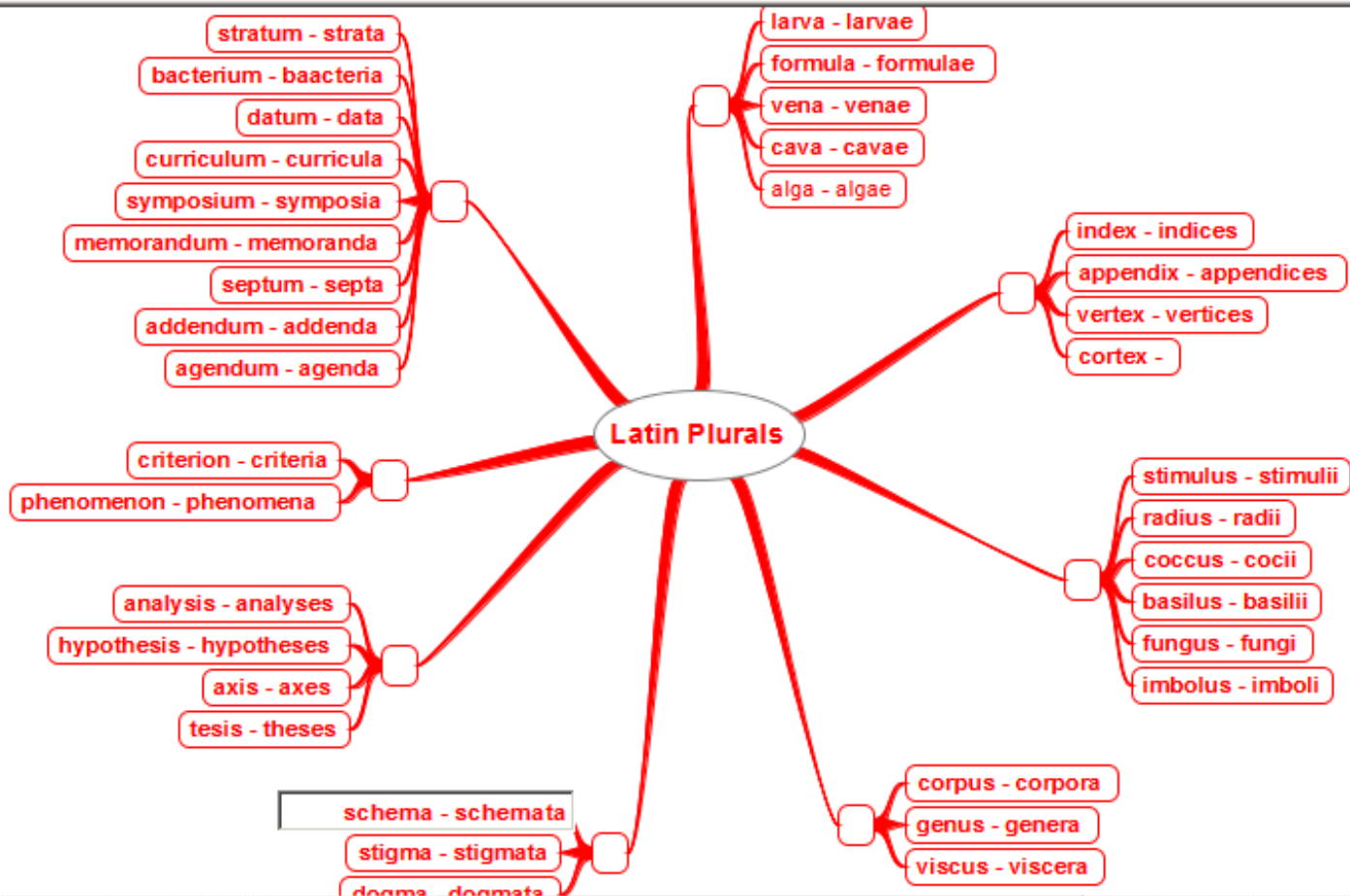


Syntactic mind-maps

Latin Plurals.mm* - FreeMin

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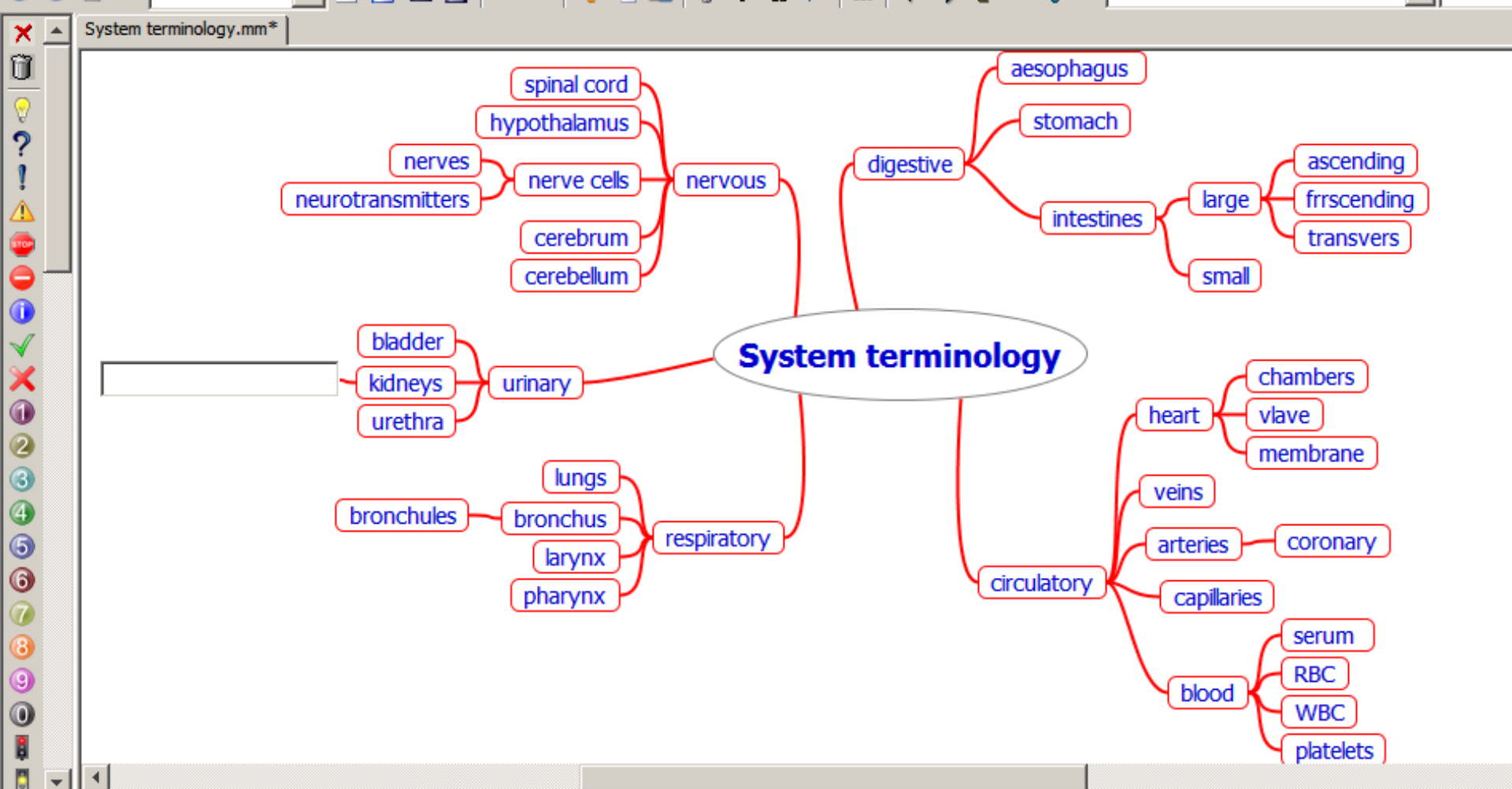


Semantic mind-map

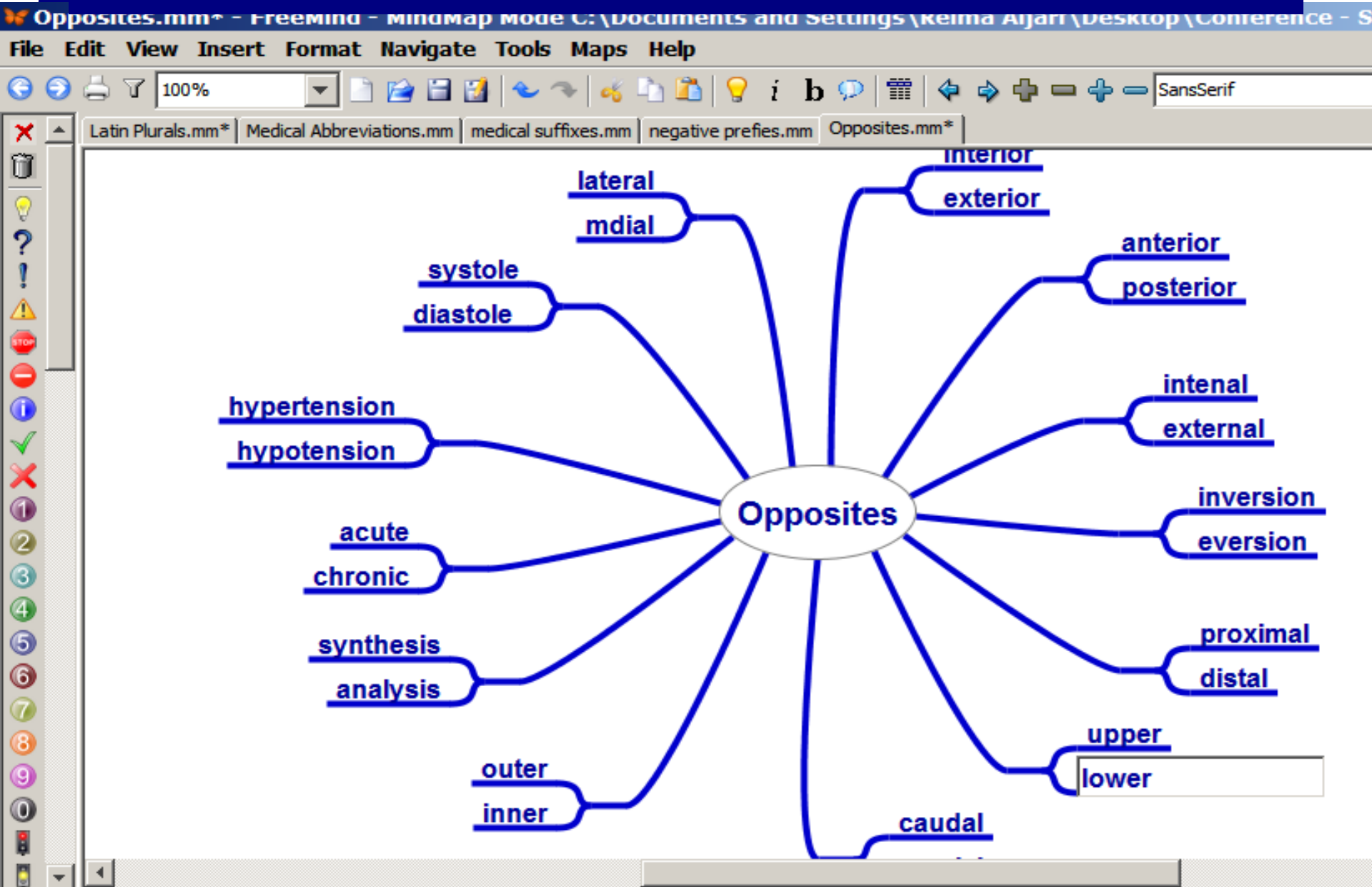
System terminology.mm* - FreeMind - MindMap Mode C:\Documents and Settings\Reima Aljari\Desktop\Conference - Slovenia

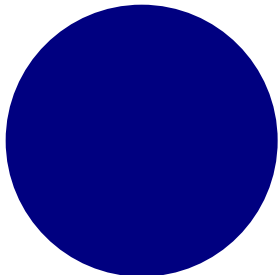
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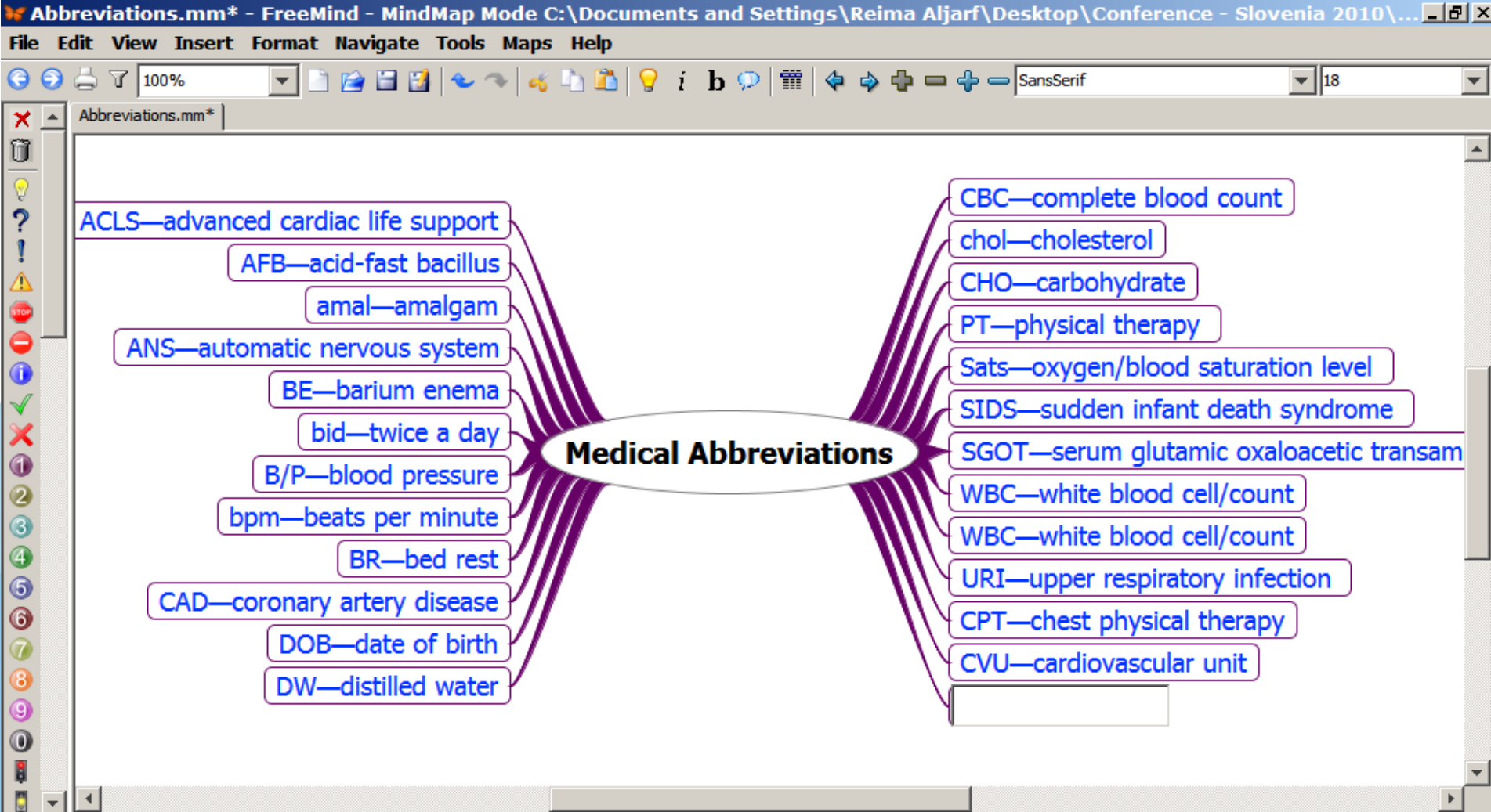


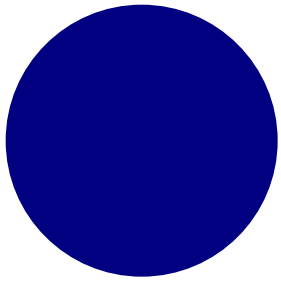
Semantic Mind-map





Semantic Mind-map





*Thanks
for your attention!*

