Template homework

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Course: *Modeling and Simulations*
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1. The basics

The easiest way to edit a Typst file is using `typst.app` online editor, a browser based editor that already has all the required packages installed. Try importing this project to typst online editor and edit there.

After opening this project in typst online editor, the first thing to edit is the information about you and the course. You can change that above. For example, the title can be changed in `#Title(reportName: "Template homework")`.

1.1. Images. The inclusion of figures needs to be inside the environment *figure*. You can see an example below.
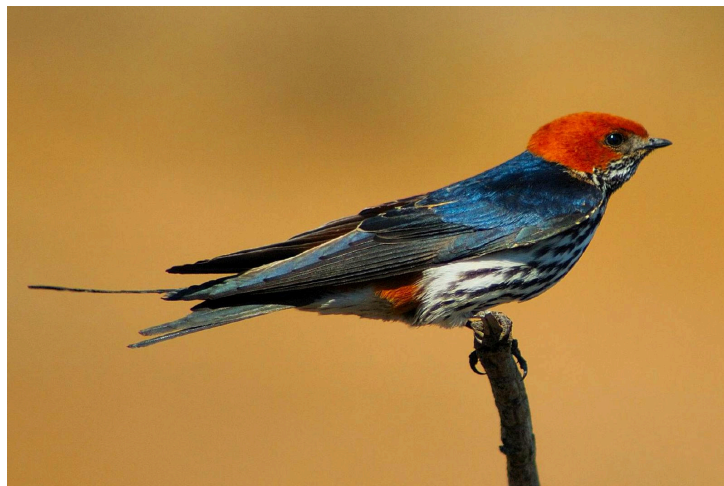

Figure 1: Figure caption edited here. The position of the image can be controlled by changing the `h` above. Use `t` for top of the page, `b` to bottom of the page, `h` to fix the position of the image, and `auto` to let typst decide. The alignment of caption can also be adjusted, by changing the `captionAlign` above, `l` indicates left, `r` indicates right, and `c` indicates center[1].

1.1.1. Sub figures. Multi figures can also be combined using the `subfigure` environment.

For more information see `Typst>Reference>Model>Figure`.

Remark: It is hard to place the iages and tables exactly where we want. Sometimes it is better to let Typst win.

| (a) A gull | (b) A tiger | (c) A mouse |

Figure 2: Pictures of animals.

1.2. Math mode. Euqations can be embedded in the text with `$...$`. For example, $a^2 = b^2 + c^2$. And can be highlighted with

$$\alpha^2 = \beta^2 + \gamma^2$$

$$\sum_{x}^{2} \tag{1.1}$$

Code like `<eq-1>` added labels to equations, figures, tables, etc. For equation, only those with labels will show reference numbering on the right. This method enables the referencing of equations using Eq. (1.1) . The same is true for figures (Fig. 1, Fig. 2a), tables (Table 1), sections (Sec. 1.1), etc[2]...

For more information see **Typst documents** and **Typst example book**.

2. Code snippets

To include code snippets we use a 3rd party library called `codly`. Import the library at the beginning of the document[3]:

```Typst
1  #import "codly.typ": *
```

And then you can write code like the example.

```C
1   // Simple C program to display "hello world"
2
3   // Header file for input output functions
4   #include <stdio.h>
5
6   // main functions
7   // where the excution of program begins
8   int main()
9   {
10    // prints hello world
11    printf("hello world");
12
```

```
13 }
```

For more information see **https://github.com/typst/packages/tree/main/packages/preview/codelst/2.0.0**. To refer it, use `@code1` to get .

3. Lists

The inclusion of list, such as enumerate or bullet points are very easy to make.

3.1. Enumerate.

1. Point 1;

2. Point 2;

3. Point 3.

Without an empty line between, it will be:
1. Point 1;
2. Point 2;
3. Point 3.

3.2. Bullet points.

- Bullet 1;

- Bullet 2;

- Bullet 3.

Without an empty line between, it will be:
- Bullet 1;
- Bullet 2;
- Bullet 3.

4. Tables

Tables are generated with a 3rd party library called `tablex`. Import it at the top of the document using:

```
1   #import "@preview/tablex:0.0.8": *
```
Typst

Below is an example of a table.

Table 1: Table caption

A1	B1	C1
A2	B2	C2

For more complex configurations, please refer to **https://github.com/PgBiel/typst-tablex**.

4. References

[1] Figure Function – Typst Documentation[EB].

[2] Reference Function – Typst Documentation[EB].

[3] Codly/README.Md at Main · Zheoni/Codly[EB].