

## Section 02

# Child packages

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### 1 INTRODUCTION

Packages can be used to create hierarchies. This is achieved by using child packages, which extend the functionality of their parent package. An example of this is the `Ada.Text_IO` package, the parent package is called `Ada` and the child package is `Text_IO`. In the next codes is illustrated the creation and implementation of the *child packages*.

For this example package is `week` is created into a `.ads` file this is the main package and it will contain only some declarations.

Code 1: week.ads

---

```

1 package Week is
2
3     Mon : constant String := "Monday";
4     Tue : constant String := "Tuesday";
5     Wed : constant String := "Wednesday";
6     Thr : constant String := "Thursday";
7     Fri : constant String := "Friday";
8     Sat : constant String := "Saturday";
9     Sun : constant String := "Sunday";
10
11 end Week;
```

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The parent child is the `Week` package and the child package is going to be `Week.Child`, the child package is divided into declaration (`.ads` file) and implementation (`.adb` file) both of them are shown in the next snippets.

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#### Code 2: week-child.ads

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```
1 package Week.Child is
2
3     function Get_First_Of_Week return String;
4
5 end Week.Child;
```

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#### Code 3: week-child.adb

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```
1 package body Week.Child is
2
3     function Get_First_Of_Week return String is
4     begin
5
6         return Mon;
7
8     end Get_First_Of_Week;
9
10 end Week.Child;
```

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Observe that in the child package the data and variables from the parent package are available. For example in the line 6 of the child package the function `Get_First_Of_Week` returns the `Mon` variable that was declared in the parent package.

The main procedure might have to add both of them the parent and the child package

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#### Code 4: main.adb

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```
1 with Ada.Text_IO; use Ada.Text_IO;
2 with Week.Child; use Week.Child;
3
4 procedure Main is
5 begin
6     Put_Line("First day of the week is: " & Get_First_Of_Week);
7 end Main;
```

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In `main.adb` the line 6 can be changed by

`Put_Line("First day of the week is: " & Week.Child.Get_First_Of_Week);`