Answer Key

Table of contents

1.1 Chapter 6 2
1.1.1 Exercise 1 2
1.1.2 Exercise 2 2

Document conventions

Convention	Usage	Example
`Courier New`	Displays code and text commands	`CY_ISR_PROTO(MyISR);` `make build`
Italics	Displays file names and paths	*sourcefile.hex*
[**bracketed, bold**]	Displays keyboard commands in procedures	[**Enter**] or [**Ctrl**] [**C**]
Menu > Selection	Represents menu paths	**File > New Project > Clone**
Bold	Displays GUI commands, menu paths and selections, and icon names in procedures	Click the **Debugger** icon, and then click **Next**.

1.1 Chapter 6

1.1.1 Exercise 1

1) What is the purpose of the call to the function `Cy_SysEnableCM4`, in the CM0+'s code?
   This function call enables the CM4 CPU.
2) Why do both of the processors need to call the function `__enable_irq`?
   Because each CPU has its own NVIC.
3) Where is the file *ipc_def.h* saved on your disk?
   In *<ApplicationDirectory>/shared/include/ipc_def.h*

1.1.2 Exercise 2

1) In the file *<ApplicationDirectory>/shared/source/COMPONENT_CM0P/ipc_communication_cm0p.c*, what is the purpose of the function `user_ipc_pipe_isr_cm0`? When does this function get called?
   This function gets called whenever a message is received by the CM0+ from the CM4. Its purpose is to call the callback function associated with the received client ID.
2) The macros `USER_IPC_PIPE_EP_ADDR_CM0` and `USER_IPC_PIPE_EP_ADDR_CM4` correspond to which endpoints in the array of endpoint structures?
   Endpoints 2 and 3.
3) When the CM4 receives a message from the CM0+, what callback(s) are run?
   The `user_ipc_pipe_isr_cm4` callback is run, then the `cm4_msg_callback` callback is run.

Trademarks
All referenced product or service names and trademarks are the property of their respective owners.

Published by

Infineon Technologies AG

81726 Munich, Germany

© 2021 Infineon Technologies AG.
All Rights Reserved.

IMPORTANT NOTICE

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics (“Beschaffenheitsgarantie”) .

With respect to any examples, hints or any typical values stated herein and/or any information regarding the application of the product, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer’s compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer’s products and any use of the product of Infineon Technologies in customer’s applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer’s technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

For further information on the product, technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies office (**www.infineon.com**).

WARNINGS

Due to technical requirements products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by Infineon Technologies in a written document signed by authorized representatives of Infineon Technologies, Infineon Technologies’ products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.