Alexandria University
Faculty of Engineering
Electrical and Electronics Engineering Department
Fall semester, 2021/2022

جامعة الإسكندرية
كلية الهندسة
قسم الهندسة الكهربية
الفصل الدراسى الأول, 2022/2021

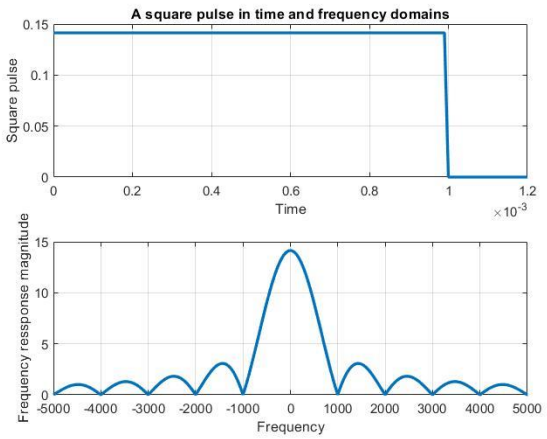
DIGITAL COMMUNICATIONS LAB

Experiment 2

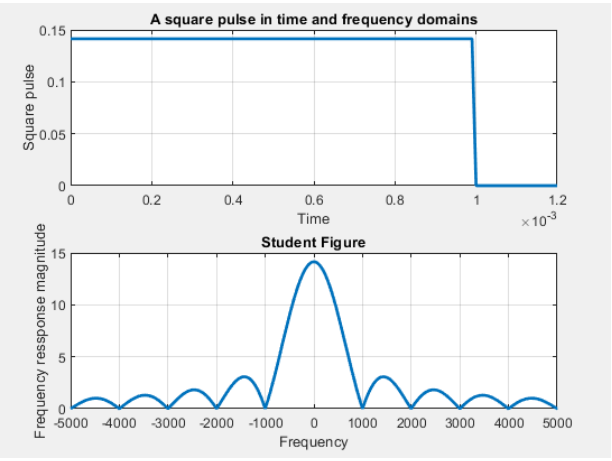
Handling noisy channels: Matched filters

Name:	Rania Hamada Mohammed
ID:	79
Section:	3

EXP. ***Complete PART 1-a in the experiment M-file Lab2_script.m and the missing implementation of the functions*** `GenerateSquarePulses`***. You should implement only the part corresponding to the unipolar case. After completing this part, insert the plots that were generated in the following table; it should be identical to the provided plot.***



INSERT YOUR PLOT HERE



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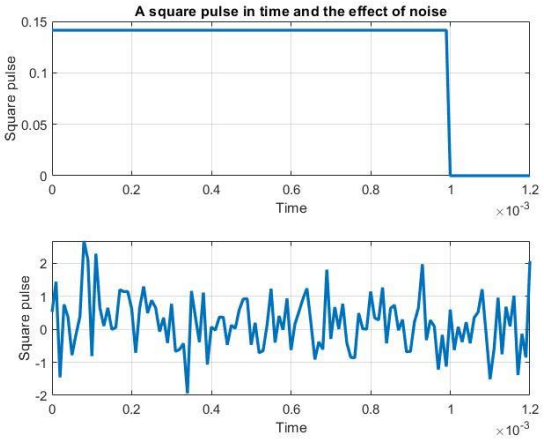
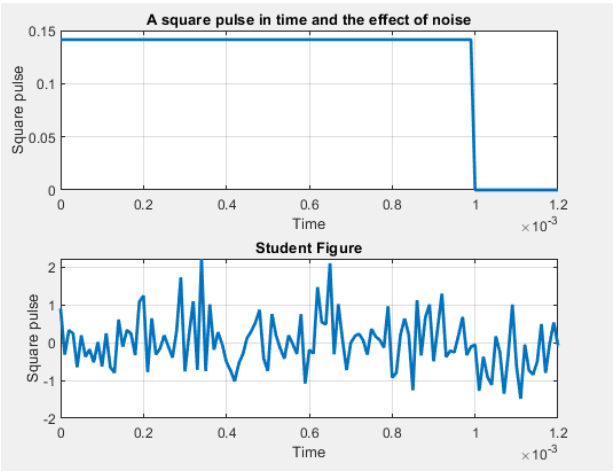
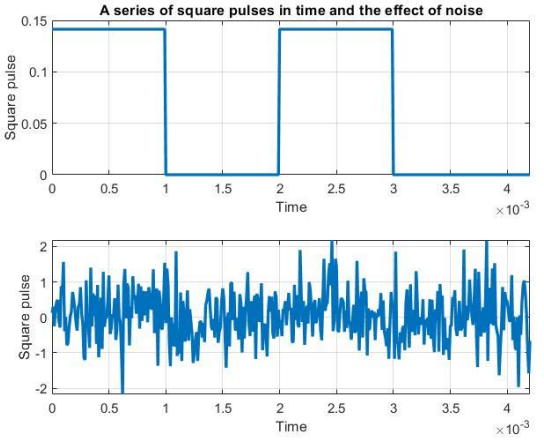
EXP. ***Complete PART 1-b in the experiment M-file Lab2_script.m and the missing implementation of the functions*** `AWGNChannel`***. After completing this part, insert the plots that were generated in the following table; it should be similar to the provided plot.***



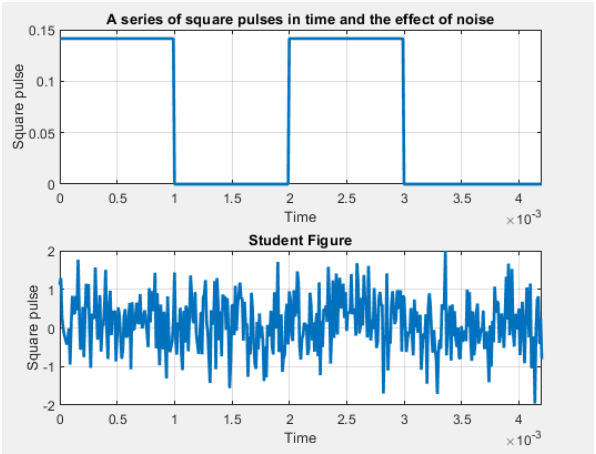
INSERT YOUR PLOT HERE



EXP. ***Complete PART 1-c in the experiment M-file Lab2_script.m. After completing this part, insert the plots that were generated in the following table; it should be similar to the provided plot.***



INSERT YOUR PLOT HERE



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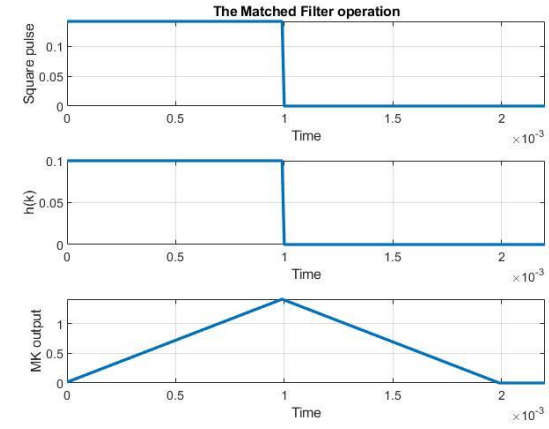
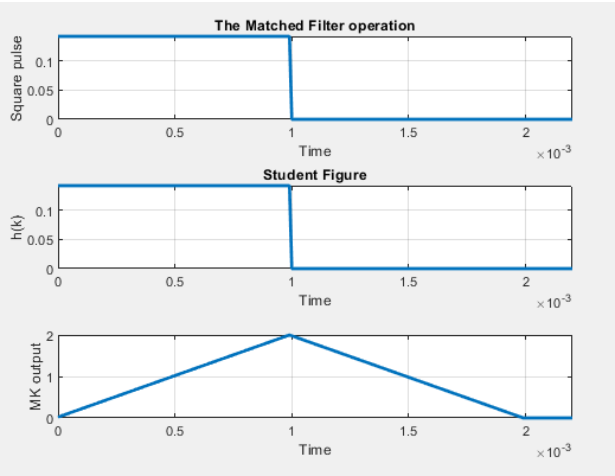
EXP. ***Complete PART 2-a in the experiment M-file Lab2_script.m and the function*** `MatchedFilter`***. After completing this part, insert the plots that were generated in the following table; it should be identical to the provided plot.***

	**INSERT YOUR PLOT HERE** 

EXP. ***Complete PART 2-b in the experiment M-file Lab2_script.m by completing the function*** `MatchedFilter`***.***

EXP. ***Complete PART 2-c in the experiment M-file Lab2_script.m. After completing the experiment, write the BER value you computed in the following table.***

For E_b/N_o ***equal to 0 dB, the BER value is equal to:***	***WRITE YOUR ANSWER HERE*** ***0.1631***

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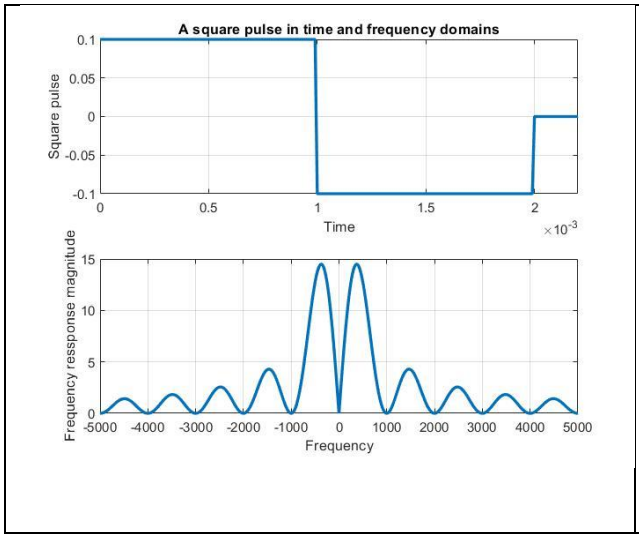
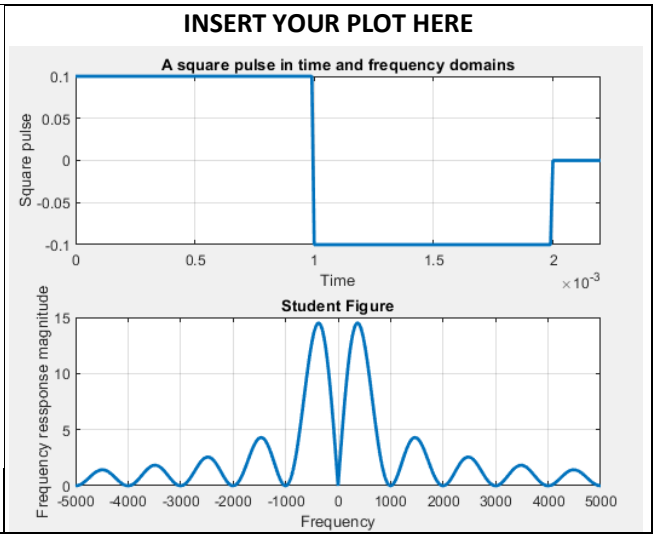
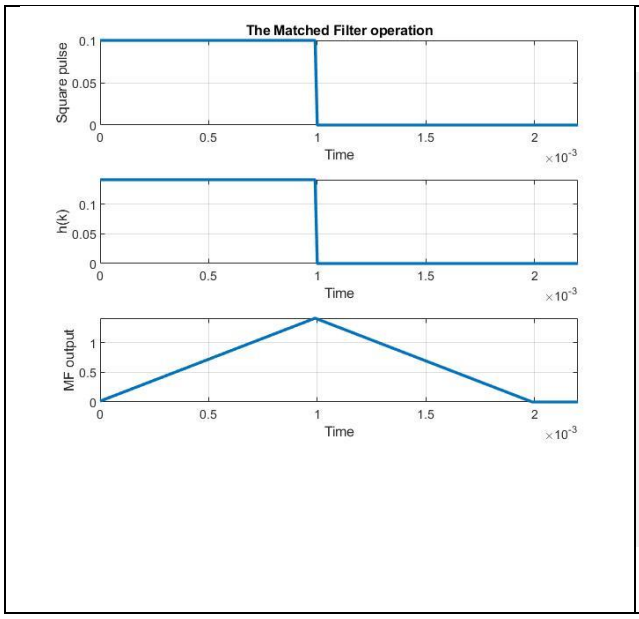
EXP. ***Complete PART 3-a in the experiment M-file Lab2_script.m and the function*** `GenerateSquarePulses`***. After completing this part, insert the plots that were generated in the following table; it should be identical to the provided plot.***



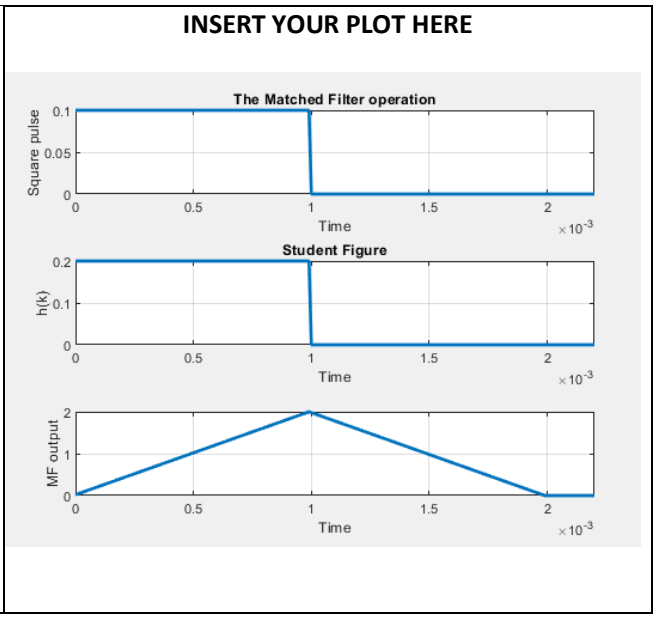
INSERT YOUR PLOT HERE



EXP. ***Complete PART 3-b in the experiment M-file Lab2_script.m and the function*** `MatchedFilter`***. After completing this part, insert the plots that were generated in the following table; it should be identical to the provided plot.***



INSERT YOUR PLOT HERE



EXP. ***Complete PART 3-c in the experiment M-file Lab2_script.m by completing the function*** `MatchedFilter`***.***

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EXP. ***Complete PART 3-d in the experiment M-file Lab2_script.m. After completing the experiment, write the BER value you computed in the following table.***

For E_b/N_o ***equal to 0 dB, the BER value is equal to:***	***WRITE YOUR ANSWER HERE*** ***0.0883***

EXP. ***Complete PART 4 in the experiment M-file Lab2_script.m. After completing the experiment, write the BER value you computed in the following table. After completing this part, insert the one plot that was generated in the following table.***

INSERT YOUR PLOT HERE