

FIRST EDITION  
NOV 2010

# BASIC PROGRAMMING C



MASITAH GHAZALI  
DAYANG NORHAYATI ABANG JAWAWI

*Faculty Of Computer Science And Information Systems*  
UNIVERSITI TEKNOLOGI MALAYSIA



# BASIC PROGRAMMING C

---

Editors:

**Masitah Ghazali**

**Dayang Norhayati Abang Jawawi**

Edited with permission from the original material by Norazah Yusof, Dayang Norhayati Abang Jawawi, Noraniah Mohd Yassin, Radziah Mohamad, Paridah Samsuri and Rohayanti Hassan, *Programming Technique I (C++)*, First Edition, 2007.

**Copyright © 2010**

All rights reserved. No part of this publication may be reproduced or distributed in any form or by any means, or stored in a data base or retrieval system, or transmitted in any form or by any means, electronics, mechanical, photocopying or otherwise, without the prior written permission of the authors.

## **Disclaimer**

This workbook and its contents are intended solely for the use of the subject Basic Programming C to be taught at Fakulti Sains Komputer dan Sistem Maklumat, Universiti Teknologi Malaysia, Skudai. The algorithms and programs in this workbook have been included for their instructional value. They have been tested but are not guaranteed for any particular purpose. The authors do not offer any warranties or representations nor do they accept any liabilities with respect to their use. The authors reserve the right to revise this publication and make changes from time to time in its content without notice.

**First Edition  
November 2010**

## CONTENTS

LAB	TOPIC	PAGE
	<b>INTRODUCTION</b>	v
	<b>TERMS</b>	vii
1	<b>RUNNING THE C PROGRAM</b>	1
	Objectives For Students	1
	Assumptions	1
	Lab Exercises :	
	Exercise 1	1
	Exercise 2	10
	Exercise 3	12
2	<b>DESIGNING PSEUDO CODE AND FLOW CHART USING MOROSOFT WORD</b>	16
	Objectives For Students	16
	Assumptions	16
	Lab Exercises :	
	Exercise 1	16
	Exercise 2	19
	Exercise 3	22
	Exercise 4	25
	Exercise 5	27
	Exercise 6	29
3	<b>DESIGN PSEUDO CODE / FLOW CHART USING MICROSOFT</b>	30
	Objectives For Students	30
	Assumptions	30
	Lab Exercises :	
	Exercise 1	30
	Exercise 2	35
	Exercise 3	38
4	<b>CONVERTING ALGORITHM TO C CODE</b>	40
	Objectives For Students	40
	Assumptions	40
	Lab Exercise :	
	Exercise 1	40
	Exercise 2	41
	Exercise 3	42

<b>5</b>	<b>WORKING WITH DATA</b>	<b>44</b>
	Objectives For Students	44
	Assumptions	44
	Lab Exercise :	
	Exercise 1	44
	Exercise 2	45
	Exercise 3	46
	Exercise 4	47
	Exercise 5	48
	Exercise 6	49
<b>6</b>	<b>INPUT &amp; OUTPUT</b>	<b>50</b>
	Objectives For Students	50
	Assumptions	50
	Lab Exercise :	
	Exercise 1	50
	Exercise 2	51
	Exercise 3	52
	Exercise 4	53
	Exercise 5	54
	Exercise 6	55
<b>7</b>	<b>SELECTION OR DECISION</b>	<b>57</b>
	Objectives For Students	57
	Assumptions	57
	Lab Exercise :	
	Exercise 1	57
	Exercise 2	58
	Exercise 3	60
	Exercise 4	61
	Exercise 5	63
	Exercise 6	64
	Exercise 7	65
<b>8</b>	<b>LOOP STATEMENTS</b>	<b>68</b>
	Objectives For Students	68
	Assumptions	68
	Lab Exercise :	
	Exercise 1	69
	Exercise 2	70
	Exercise 3	72
	Exercise 4	73
	Exercise 5	74
	Exercise 6	75
	Exercise 7	77
	Exercise 8	78
	Exercise 9	79

	Exercise 10	79
<b>9</b>	<b>NESTED LOOP</b>	<b>82</b>
	Objectives For Students	82
	Assumptions	82
	Lab Exercise :	
	Exercise 1	82
	Exercise 2	84
	Exercise 3	85
	Exercise 4	86
<b>10</b>	<b>PREDEFINED FUNCTIONS</b>	<b>88</b>
	Objectives For Students	88
	Assumptions	88
	Lab Exercise :	
	Exercise 1	88
	Exercise 2	89
	Exercise 3	90
	Exercise 4	90
<b>11</b>	<b>USER-DEFINED FUNCTION</b>	<b>91</b>
	Objectives For Students	91
	Assumptions	91
	Lab Exercise :	
	Exercise 1	91
	Exercise 2	92
	Exercise 3	96
	Exercise 4	98
	Exercise 5	101
	Exercise 6	102
<b>12</b>	<b>ONE-DIMENSIONAL ARRAY</b>	<b>105</b>
	Objectives For Students	105
	Assumptions	105
	Lab Exercises :	
	Exercise 1	105
	Exercise 2	109
	Exercise 3	111
<b>13</b>	<b>TWO-DIMENSIONAL ARRAY</b>	<b>115</b>
	Objectives For Students	115
	Assumptions	115
	Lab Exercises :	
	Exercise 1	115
	Exercise 2	118