1. Consignor / Exporter

Shirandi

2. Ref No(office use only)

CE320

Certificate of Origin

National Chamber of Exporters of Sri Lanka

No 532/4K, Sirikotha Lane, Galle Road, Colombo-03
Sri Lanka
Phone- 0094-11-4651765
Fax- 0094-11-2372818
E-mail - nce@nce.lk, nce.dco@gmail.com
Web- www.nce.lk

3. Consignee

Nimali

4. Invoice No. & Date (If Applicable)

7. Country of Origin: Sri Lanka

5. Port of Loading

6. Vessel

8. Port of Discharge

9. Place of Delivery

10. Goods Item	11. Shipping Marks	12. Package Type / Qty	13. Summary Description	14. Qty & Unit

For Official Use Only

REGISTERED

We Certify that goods mentioned herein are of Sri Lankan origin

Authorised Signatory
National Chamber of Exporters of Sri Lanka

DRAFT

Digitally signed by Shamitha - test
Date: 2016.11.25 12:52:21 +05:30

15. Total Invoice Value (State Currency)

16. Total Quantity

I declare that the goods are of Sri Lanka origin, all particulars above are correctly stated, and that the minimum value addition of goods exported is not less than 25% of the FOB price

Competent Authority - National Chamber of Exporters of Sri Lanka		**Submitted by**	
Name of Authorized officer	Contact No +94 114651765	Name & Designation	Contact No
Date	Signature (Authorized Officer)	Date	This is a computer generated document **No signature required**

INTERNATIONAL COLLEGE OF BUSINESS & TECHNOLOGY LTD
ASSIGNMENT BRIEF

PROGRAMME	HND in Computing and Systems Development//HND in Software Development			
UNIT NO	18	**UNIT TITLE**	Procedural Programming	
ASSIGNMENT NO	01	**ASSIGNMENT TITLE**	Automated inquiry system for Knowledgebase book sellers	
INDIVIDUAL/ GROUP	Individual		**WORD COUNT**	
STUDENT NAME			**STUDENT ID**	
ASSESSOR	Ms. Chamila Attanayaka		**INTERNAL VERIFIER**	Ms Dushyanthi Nisansala
DATE SET	14/05/2015			
SUBMISSION DATE	26/06/2015		**SUBMITTED DATE**	
RESUBMISSION DATE			**RESUBMITTED DATE**	
FINAL GRADE	**ORIGINAL**		**RESUBMISSION**	

UNIT OUTCOMES COVERED

LO1.Understand the principles of procedural programming
LO2.Be able to design procedural programming solutions
LO3.Be able to implement procedural programming solutions
LO4. Be able to test procedural programming solutions

AUTHENTICITY STATEMENT

I ,..... hereby confirm that this assignment is my own work and not copied or plagiarized. All the sources, from which information has been obtained for this assignment, have been referenced. I further confirm that I have read and understood the rules and regulations out plagiarism and copying and agree to be bound by them.

LEARNER SIGNATURE:	**DATE:**

Grading opportunities available/ achieved	L1.1	L2.1	L2.2	L3.1	L3.2	L3.3	L4.1	L4.2	L4.3	L4.4	L4.5
Original Submission											
Re submission											
Grading opportunities available/ achieved	**M1.1**	**M2.5**	**M3.3**	**D1.1**	**D2.3**	**D3.5**					
Original Submission											
Re submission											

ASSESOR NAME:	**SIGNATURE:**	**DATE:**

Assignment Brief

Read the following scenario to build a Console Application to meet the requirements of the given organization and write a report covering following tasks.

It should be noted that the students will be assessed for their originality and creativity of the software solution.

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Scenario

Knowledgebase is a famous book sellers they sells enormous range of books under different categories such as IT, English, fictions, music etc. Customers can make an inquiry about different books over the phone and by walking to their help desk. Company has manual system to maintain the details of books (Book id, category, and book name, description about book, price, available quantity, publisher, and author) Day by day their customer growth is growing up therefore it has become very hard for the staff to handle day to day inquiries. Management needs a proper solution to reduce work load of employees, to get better performance from them and enhance customer satisfaction through better service. So they decides to go for automated inquiry system.

Assume that you are playing major role of the software team who is going to design and develop an inquiry system for **Knowledgebase**

Your system should have below mentioned features

1. Proper authentication to the system(Login)

   Use user name and password
2. About us

   Information about company and contact details
3. List Special Offers
4. List available book categories
5. Search specific book information

   Enter book name and search more details
6. Quit

Note: You can add more functionality to show your creativity and expand the system.

Your assumptions should be clearly mentioned.

User friendly interfaces.

Appropriate error messages

And necessary validations should be included in your system

System documentation should also include the followings:

Program Listing

Have to print all the source codes and ensure that you have paid attention to indentation and comments.

References (Use Harvard referencing)

This must provide with the web addresses of the sites, form where you took any images or references, from. While listing the bibliography, proper name of the books should be given.

Carefully investigate the given scenario and provide the proposed solution.

Attach softcopy of error free program with your documentation.

Keep all the backups

Assignment Tasks

1. Analyse the types of programming languages comparatively to the current programming trends in the field. You may also have to analyse the suitability of the language selected to develop the given program solution via justifying the usage of basic procedural programming concepts like sequence, selection & iteration.(**LO1.1**)

2. Produce detailed requirements specification including input output requirements, program units' data and file structures requirements to implement the given design. (**LO2.1**)

3. Design the flow chart for the above solution, using a range of symbols, which can be used with flowcharting. **(LO2.2)**

4.

a) Build a program using C++ to desired standards addressing the above requirements. **(LO3.3)**
   - Use file handling techniques and data storage mechanisms effectively**.(M1.1)**
   - User friendliness of the system(easy navigation between modules and creativity) and accuracy of the system need to be concerned **.(D3.5)**

b) Emphasize on control structures, repetition structures you implemented in writing your algorithm in relation to your system. **(LO3.1)**

   - Appropriate data types, arrays, selection & repetition structures must be used. **(M2.5)**

c) Modularise the proposed programming solution using a specific method (ex: functions) to reduce the complexity of the task programming. There by identify the types of parameter passing and implement effective data passing between developed modules. **(LO3.2)**

d) Suitable messages for inputs, outputs and onscreen help should be used to make the program user friendly. Also working of the program must be explained by preparing a user document (User manual) for the developed solution to assist the users to work with it. Brief explanation and screen capturing would be helpful in this section. **(LO4.4).**

e) Document the code to provide good understanding of the program and its functionalities using different types of comments, and other necessary

information which will make future maintenance of the developed program solution easier.**(LO4.5)**

5. Explain the testing techniques which you think will be most effective to test the developed program solution. [Appropriate test case structures can be provided in this context].**(LO4.1)**

6. Produce a test plan with appropriate test cases to carry out the testing process [The proper navigation thought the program, validations and calculations done etc. can be tested] and critically analysis of testing conduct by comparing expected test result with actual results.[justify variations providing reasons]**(LO4.2)**

7. Provide the implemented system to someone and (may be your friend) get their feed about your system. You have to include copies of questionnaires you provided to them as evidences. Write a small report on how you plan to improve your system further more based on the findings you made.**(LO4.3)**

8. Organize and manage activities within the allocated time scale. Use proper scheduling techniques to enhance planning and management of the project and explain how the activities have undertaken & time was managed during the preparation of the assignment. **(D2.3)**

9. Provide a conclusion including the strengths and weaknesses of the developed program with very strong justifications for language selection and modularization. Discuss the decision of developing the program solution using procedural

programming methodology, and justify the way you achieve coding efficiency by proper modularization. **(D1.1)**

10. Documentation need to be clear, logical flow of contents, and follow standard report structure. User manual need to be user friendly and descriptive. Maintain good academic writing throughout the report. Use different sections of the source code for explanation. **(M3.3)**

For the developed application program, system documentation (Report contents) should cover following topics:

Cover Page

Details such as project title, student details etc. has to be specified

Table of Contents

Students have to list all sections of the document titles, sequentially with appropriate page numbers

Introduction and Problem Background

Introduction should be given according to the given scenario.

Provide the details about the types of programming languages and current programming trends in the field. Analyze the suitability of the language selected to develop the given program solution providing proper justification.

Proposed system plan

Proposed system solution has to be described with initial logical planning. (Using flow diagrams)

Implementation and Testing

Testing

- Test plan
- Test Cases and Results
- Conclusion of tests conducted

The proper navigation though the program, validations and calculations done etc. can be tested.

Program Listing

Have to print all the source codes and ensure that you have paid attention to indentation and comments.

Operating Instructions (This is from user's point of view)

- User Manual

  This should guide the user to work with the program. Brief explanation and screen capturing would be helpful in this section.

Conclusion

- Program Strengths
- Program Weaknesses
- Program Enhancement

This should list out strengths (Good points) and weaknesses (Bad points) of the developed program and also the enhancements (the improvements) that can be accomplished with the system. State what you would do to improve on the weaknesses of the program as mentioned above.

References

This must provide with the web addresses of the sites, form where you took any images or references, from. While listing the bibliography, proper names of the books should be given.

Resources (chosen by Edexcel)

Books

Davis S R – *C++ for Dummies* (Wiley, 2009) ISBN-10: 0470317264

McBride P K – *Turbo Pascal Programming Made Simple* (Made Simple, 1997) ISBN 0750632429

McGrath M – *C Programming in Easy Steps* (In Easy Steps Limited, 2009) ISBN 184078363X

Parkin A and Yorke R – *Cobol for Students* (Butterworth Heinemann, 1995) ISBN 0340645520

Websites

www.cplusplus.com/doc/tutorial/

www.cprogramming.com/

Appendices

Related attachments go here.

NOTE:

Depth of coverage of these tasks will vary for PASS to MERIT to DISTINCTION.

To get score (PASS/ MERIT/ DISTINCTION) should meet all criteria listed below in those categories. For getting MERIT/ DISTINCTION students should exhibit more features not listed there.

Outcomes/Criteria for PASS	Evidence	Assessor Comments / Page no
LO1Understand the principles of procedural programming.		
1.1 Discuss the principles, characteristics and features of procedural programming	Reasons for choice of language as suitability of features.	
LO2 Be able to design procedural programming solutions.		
2.1 identify the program units and data and file structures required to implement a given design.	Detailed requirements specification including inputs, outputs, processing, constraints, units, data, file structures.	
2.2 Design a procedural programming solution for a given problem.	logical flow charts with proper module diagrams	
LO3Be able to implement procedural programming solutions.		
3.1 Select and implement control structures to meet the design algorithms.	Proper use of decisions, repetition, functions, etc.	
3.2 Correctly use parameter passing mechanisms.	Pass relevant parameters by value or reference, return values	
3.3 Implement a procedural programming solution based on a prepared design.	Convert module flow diagrams to relevant c++ functions.	
LO4 Be able to test procedural programming solutions.		

4.1Critically review and test a procedural programming solution.	provide test plan and test cases	
4.2 Analyse actual test results against expected results to identify discrepancies.	Test result discussion and conclusion	
4.3 Evaluate independent feedback on a developed procedural programme solution and make recommendations for improvements.	Prepare a suitable questionnaire, get the feedback, Evaluate it and Provide recommendations	
4.4 Create onscreen help to assist the users of a computer program.	Supportive onscreen help and user friendly descriptive user manual	
4.5Create documentation for the support and maintenance of a computer program.	Useful comments within the code for future maintenance	

Grade Descriptor for MERIT	**Evidence**	**Assessor Comments / page no**
M1 Identify and apply strategies to find appropriate solutions M1.1 Effective judgments have been made	**Practical observation & written report** Use of proper input/output files to read, store and update data	
M2 Select /design and apply appropriate methods/techniques M2.5 the design of methods/techniques has been justified	**Practical observation & written report** Use of suitable data types as int, string, double, etc. Use of 1D, 2D arrays, selection & repetition structures such as if-else, switch, for, do-while, etc.	
M3 Present and communicate appropriate findings	**written report:** logical flow of contents in the document, Descriptive user	

M3.3 A range of methods of presentation have been used and technical language has been accurately used	manual	

Grade Descriptor for DISTINCTION	**Evidence**	**Assessor Comments/ page no**
D1 Use critical reflection to evaluate own work and justify valid conclusions **D1.1**Conclusions have been arrived through synthesis of ideas and have been justified	**written report:** Strong justification of procedural programming methodology and the way you achieve coding efficiency by proper modularization.	
D2 Take responsibility for managing and organising Activities D2.3 Activities have been managed	**written report:** Gantt chart must be provided in the appendix section with proper explanation	
D3 Demonstrate convergent/lateral/ creative thinking D3.5 Innovation and creative thought have been applied	**Practical observation & a written report:** User friendliness of the system, login screens, and Creativity.	

edexcel INTERNATIONAL

Practical Observation Sheet

Module Name : **Procedural Programming**

Module No : **Unit 18**

Student Name **:……** **Student No** **:……**

Assessor Name **: …….**

Internal Verifier **:……**

Task/outcome	Possible evaluation	Assessor Comments
LO 3.3	Demonstrate the system to check the Functionality, Completeness of the implemented system	
LO 3.2	Correct use of parameter passing mechanisms	
LO 3.1	Proper use of appropriate data types, selection & repetition structures.	
M2.5	Use of suitable data types as int, string, double, etc. Use of 1D, 2D arrays, selection & repetition structures such as if-else, switch, for, do-while, etc.	
LO 4.2	Feed the system with valid and invalid data to check the robustness on handling the errors	
LO 4.4	Run the program enter option for onscreen help and demonstrate it	
M 1.1	Effective use of file handling techniques and data storage mechanisms.	
D 3.5	User friendliness of the system, Login facilities , Proper navigation within system New ideas & creativity	
Assessor Signature :		**Date:**
Student Signature :		**Date:**

IV Comments :	
IV Signature:	**Date:**

Formative feedback from the Assessor

Module name / No : ……..

Student name : ……..

Student number :……...…

Assessor Name :……..

Date	Area Covered	Feedback	Signature of the Assessor

Student signature ……. Date……