

KZN DEPARTMENT OF EDUCATION  
PINETOWN DISTRICTS  
GREENBURY SECONDARY SCHOOL



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**SEPTEMBER CONTROL TEST**

**2018**

INFORMATION TECHNOLOGY  
GRADE 11

EXAMINER : M PADAYACHEE

MODERATOR: S NAIDOO

DURATION : 1 ½ HOURS

MARK: 60

(Please ensure that this paper consists of 7 pages and 2 question)

## INSTRUCTIONS AND INFORMATION

1. This question paper contains one question based on general programming techniques.
2. The duration of this examination is 1 ½ hours.
3. Make sure that you answer the question according to the specifications that are given in the question. Marks will only be awarded according to the set requirements.
4. Answer only what is asked in the question. For example, if the question does not ask for data validation, then no marks will be awarded for data validation.
5. Your programs must be coded in such a way that they will work with any data and not just the sample data supplied or any data extracts that appear in the question paper.
6. Routines such as search, sort and selection must be developed from first principles. You may not use the built-in features of a programming language for any of these routines.
7. All data structures must be defined by you, the programmer. You may not use components provided within the interface to store and later retrieve data.
8. You must save your work regularly on the folder you have created, or the disk space allocated to you for this examination.
9. Make sure that your name appears as a comment in every program that you code.
10. You are responsible submission of all code you have written, therefore it is detrimental that you save your work correctly on the space allocated. Missing pieces of code will receive a zero mark.

**QUESTION ONE:**

The advertising department of the local newspaper has a classified section where readers can place advertisements on a weekly basis. They decided to make use of a database to assist them in managing the placement of these advertisements. A program is being developed to make it easier for the staff at the newspaper to answer certain queries being made frequently. You are required to assist in developing this program.

The information on the clients who placed advertisements as well as the advertisements being placed have been captured in a database called **NewspaperDB.mdb**.

- 1.1. Complete the code in the **DisplayClients** button by formulating an SQL statement to display all the fields in the **ClientsTb** table in alphabetical order according to the names of the clients. Example of output:

ClientID	ClientName	TelNum	Suburb
BE013	Best Cars	(011) 678 9883	Bedfordview
CA012	CarSelect	(011) 098 3445	Roodepoort
DO007	DOE	(011) 285 9887	Bedfordview
DB002	DogBox	082 123 3210	Midrand
EC009	EconoTravel	(011) 542 3438	Johannesburg

(3)

- 1.2. Complete the code in the **AllAdverts** button by formulating an SQL statement to display all the fields in the **AdvertsTb** table except the **ClientID** field. Also display the **ClientName** field from the **ClientsTb** table. NOTE: You will need to link the tables with an appropriate *where/join* clause to be able to do this.

Example of the output:

AdvertID	DatePlaced	WeeksRunning	NumWords	Paid	Category	ClientName
AN001	2008/10/19	2	12	True	Animals	The Pet Place
AN002	2008/10/28	3	27	False	Animals	DogBox
CO002	2008/11/20	2	16	True	Computers	HiTech Goodies
CO004	2008/10/12	2	10	False	Computers	HiTech Goodies
CO001	2008/11/23	2	12	True	Computers	HiTech Goodies
CO003	2008/11/16	3	14	True	Computers	HiTech Goodies
ST002	2008/11/26	2	12	False	Stationery	Scappers Heaven
ST001	2008/12/11	1	35	False	Stationery	Scappers Heaven
PH001	2008/12/10	1	30	True	Photographic	PhotoPro

(3)

- 1.3. Complete the code in the **CatMonth** button, by asking the user to enter the name of the category and the number of the month as inputs. Formulate an SQL statement to display the **AdvertID**, **DatePlaced** and

**WeeksRunning** fields for the adverts in the category and month entered by the user. Example of the output where the user enters 'Computers' as the category and 11 as the number of the month (on the next page):

AdvertID	DatePlaced	WeeksRunning
CO002	2008/11/20	2
CO001	2008/11/23	2
CO003	2008/11/16	3

(6)

- 1.4. Complete the code in the **ShortLongAdverts** button by formulating an SQL statement to display the **AdvertID**, the number of words and the names of the clients who placed adverts with less than 15 and more than 30 words. Display suitable headings. NOTE: You will need to link the tables with an appropriate *where/join* clause to be able to do this. Example of the output:

AdvertID	Number of Words	Client Name
AN001	12	The Pet Place
CO004	10	HiTech Goodies
CO001	12	HiTech Goodies
CO003	14	HiTech Goodies
ST002	12	Scappers Heaven
ST001	35	Scappers Heaven
JO001	35	DOE
CA003	14	CarSelect
CA005	35	Pedigree Cars

(6)

- 1.5. Complete the code in the **UpdateAdverts** button by asking the user to enter the ID of the advert and the number of words to be added.
- Formulate an SQL statement to update the number of words for the advert in the first SQL string.
  - Display the IDs and the number of words of all the advertisements after it has been updated in the second SQL string.

(6)

AdvertID	Words
CA002	29
CA003	20
CA004	15
JO001	35
JO002	30
CA005	35
CO002	16
AN001	22
AN002	27
CA006	25

ID AN001 was updated from 19 to 22 words.

- 1.6. Complete the code in the **NotPaid** button by asking the user to enter a letter of the alphabet. Formulate an SQL statement to display the IDs of

the adverts that have not been paid for in the categories starting with the letter entered by the user. Also display the names of the categories and the names of the clients as well as the **Paid** field. NOTE: You will need to link the tables with an appropriate *where/join* clause to be able to do this. Example of the output if the user enters the letter S as input:

AdvertID	Category	Name of Client	Has Paid
ST002	Stationery	Scappers Heaven	False
SP001	Sports	SportsPro	False
ST001	Stationery	Scappers Heaven	False

(6)

- 1.7. Complete the code in the **CostAdverts** button. Formulate an SQL statement to list the **AdvertID**, **DatePlaced**, **NumWords**, **WeeksRunning** and **Cost** of all the advertisements placed after 16 November 2008. **Cost** is a calculated field. The cost of an advertisement must be calculated at 50c per word per week. Example of output:

AdvertID	DatePlaced	NumWords	WeeksRunning	Cost
CA005	2008/12/15	35	3 R	52.50
CO002	2008/11/20	16	2 R	16.00
CA006	2008/12/01	25	2 R	25.00
ST002	2008/11/26	12	2 R	12.00
PR001	2008/12/10	15	2 R	15.00
SP003	2008/12/10	18	2 R	18.00
CA001	2008/12/10	15	3 R	22.50
CO001	2008/11/23	12	2 R	12.00
PH001	2008/12/10	30	1 R	15.00
ST001	2008/12/11	35	1 R	17.50

(6)

- 1.8. Complete the SQL code in the **CountCellphones** button that will determine and display the number of clients with cellphone numbers. A cellphone number starts with 0 as the first digit. Example of output:

Number of clients with cellphone numbers
5

(4)

## QUESTION TWO

Write RAD code for the following buttons in the Q2 tabsheet:

*N.B. All RAD code must be written from first principles. No predefined methods will be accepted.*

- 2.1. Code the button **AmntOwing** to receive the name of a category as an input and The price per word. Display the date of the advert, the client ID and the amount owed for the adverts that have not been paid. Display the total amount owed. Use the rich edit area for all your displays as shown below: (12)

Sample Input:

Enter Category

Cars

OK Cancel

Enter Price per word

5.00

OK Cancel

Q1    Q2

DATE OF ADVERT	CLIENT ID	AMOUNT OWED
2008/10/10	BE013	R 145.00
2008/10/24	CA012	R 100.00
2008/11/12	CA012	R 75.00
2008/12/15	PE014	R 175.00

The total owing for for Cars is R495.00

Amount Owing

2.2. Program the **ClientsInSuburb** button to display all Client names of the suburb selected from the combo box. (8)

Sample run:

The screenshot shows a software interface with a list box titled "Clients in Centurion are :". The list contains the following items: "The Pet Place", "PhotoPro", "SportsPro", and "Pedigree Cars". To the right of the list is a dropdown menu with "Centurion" selected. Below the list box are two buttons: "Amount Owing" on the left and "Clients In a Suburb" on the right.

[20]

**TOTAL = 60**

**GREENBURY SECONDARY SCHOOL**



DEPARTMENT OF MATHS & SCIENCES  
H.O.D. MR L PILLAY

*[Signature]*  
12/04/2018

