# **KZN DEPARTMENT OF EDUCATION** PINETOWN DISTRICTS **GREENBURY SECONDARY SCHOOL**



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
D0007 D0E	(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 NumW	ords	Paid	Category	ClientName
AN001	2008/10/19	. 2	12	True	Animals	The Pet Place
AN002	2008/10/28	3	27	False	Animals	DogBox
CO 002	2008/11/20	2	16	True	Computers	HiTech Goodies
CD004	2008/10/12	2	10 1	False	Computers	HiTech Goodies
CO 001	2008/11/23	2	12.	True	Computers	HiTech Goodies
CO 003	2008/11/16	3-	14	True	Computers	HiTech Goodies
ST002	2008/11/26	2	12 1	False	Stationary	Scappers Heaven
ST001	2008/12/11	11	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
CO 001	2008/11/23	2
CO 003	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 Numb	er of Words Client Name
AN001	12 The Pet Place
CO004	10 HiTech Goodies
C0001	12 HiTech Goodies
CO003	14 HiTech Goodies
ST002	12 Scappers Heaven
ST001	35 Scappers Heaven
J0001	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.
  - (a) Formulate an SQL statement to update the number of words for the advert in the first SQL string.
  - (b) Display the IDs and the number of words of all the advertisements after it has been updated in the second SQL string. (6)

1 , 1 , 20	<b></b>	
Advertil	D 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:

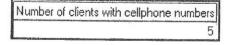
AdvertID	Category	Name of Client	Has Paid
ST002	Stationery	Scappers Heaven	False
SP001	Sports	SportsPro	False
ST001	Stationery	Scappers Heaven	False

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
CO 001	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:



(4)

[40]

### **QUESTION TWO**

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

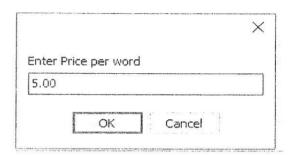
N.B. All RAD code must be written from first principles. No predefined methods will be accepted.

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 Ca	incel
00	111001



Q1 Q2

g+	war and the state of the state		
DATE OF ADVERT	CLIENT ID	AMOUNT OWED	
2008/10/10 2008/10/24 2008/11/12 2008/12/15	BE013 CA012 CA012 PE014	R 145.00 R 100.00 R 75.00 R 175.00	
The total owing for	for Cars is R495.0	00	
Amount Owin			ATTENDED ATTENDED IN THE COMMISSION OF THE COMMI

2.2.	Program the ClientsInSubsected from the combo be	urb button to display all Client names of the suburb ex.	(8)
S	ample run:		
The P Photo Sport		Centurion	V
	Amount Owing	Clients In a Suburb	

[20]

TOTAL = 60

GREENBURY SECONDARY SCHOOL

DEPARTMENT OF MATHS & SCHOOL

H.O.D. MR L PILLAY

12/04/2015

