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**ОТЧЕТ**

**UNIT 3**

«**Computer applications**»

по дисциплине:

**Профессиональная подготовка на английском языке**

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Contents

[**Starter** 2](#_Toc25313282)

[1. List as many uses as you can for computers in one of these areas. 2](#_Toc25313283)

[**Reading** 2](#_Toc25313284)

[2. Study this diagram. Using only the diagram, try to list each stage in the operation of this computerized speed trap to make an explanation of how it operates. 2](#_Toc25313285)

[3. Part 1 of the text describes the system which predates the one shown in Fig 1. Does it contain any information that may help complete your explanation? Read it quickly to find out. Ignore any information which is not helpful to you. 2](#_Toc25313286)

[4. Part 2 describes the new system. Read it to complete the stages in your explanation.. 2](#_Toc25313287)

[**Language work** 2](#_Toc25313288)

[5. Describe the operation of the new speed trap by converting each of these statements to the Present passive. Add information on the agent where you think it is necessary. 2](#_Toc25313289)

[6. With the help of this diagram, sequence these steps in the operation of an EPOS till. Then write a description of its operation in the Present passive. 3](#_Toc25313290)

[**Problem solving** 3](#_Toc25313291)

[7. Assuming cost is not a problem, what computer applications would make today's cars safer, more comfortable, more secure and more efficient? List your ideas; then compare ideas with others in your group. 3](#_Toc25313292)

[**Speaking** 4](#_Toc25313293)

[8. Be prepared to describe the process shown in your diagram to your partner. Take notes on the process described to you. Ask your partner to repeat or explain further if you do not understand any of the steps in his/her description. If you prefer, you may describe another computing process you are familiar with. 4](#_Toc25313294)

[**Writing** 4](#_Toc25313295)

[9. Write a description of the process you described in Task 8. 4](#_Toc25313296)

[**Specialist reading** 4](#_Toc25313297)

[A. Find the answers to these questions in the following texts. 4](#_Toc25313298)

[B1. Match the terms in Table A with the statements in Table B. 5](#_Toc25313299)

[B2. Mark the following statements as True or False: 5](#_Toc25313300)

[B3. Complete the following description of the data mining process using words from the text: 5](#_Toc25313301)

**Starter**

1. List as many uses as you can for computers in one of these areas.

Table A

|  |  |  |
| --- | --- | --- |
| 1 | Supermarkets | product accounting  cashier operations  accounting and banking operations |
| 2 | Hospitals | patient records  diagnosis defining  disease history logging |
| 3 | Airports | security operations  passengers recordings  thickets selling  flight planning |
| 4 | Police headquarters | accounting of citizen appeals  surveillance systems |

**Reading**

2. Study this diagram. Using only the diagram, try to list each stage in the operation of this computerized speed trap to make an explanation of how it operates.

|  |  |
| --- | --- |
| 1 | Camera 1 records the number plate of a passing car and fixes the time of the passage. |
| 2 | Camera 2 does the same the camera 1 did. |
| 3 | Then the system processor calculates the speed of the car and records it. |
| 4 | If the speed was exceeded, the details of the speeding car sent to the police headquarter. |

3. Part 1 of the text describes the system which predates the one shown in Fig 1. Does it contain any information that may help complete your explanation? Read it quickly to find out. Ignore any information which is not helpful to you.

I think in the suggested text is described the system that runs completely different than the system present in Fig.1. The common part is that the function of both systems is to record speeding vehicles and send their details to police headquarter.

4. Part 2 describes the new system. Read it to complete the stages in your explanation..

**Language work**

5. Describe the operation of the new speed trap by converting each of these statements to the Present passive. Add information on the agent where you think it is necessary.

|  |  |  |
| --- | --- | --- |
| 1 | The first unit records the time each vehicle passes. | The time of each passing vehicle is recording by the first unit. |
| 2 | It identifies each vehicle by its number plates using OCR software. | Each vehicle is identified by its number plate by OCR software. |
| 3 | It relays the information to the second unit. | The information is relayed to the second unit. |
| 4 | The second unit also records the time each vehicle passes. | The time each vehicle passes the second unit is also recorded. |
| 5 | The microprocessor calculates the time taken to travel between the units. | The time taken to travel between the units is calculated by the microprocessor. |
| 6 | It relays the registration numbers of speeding vehicles to police headquarters. | The registration numbers of speeding vehicles are relayed to the police headquarters. |
| 7 | A computer matches each vehicle with the DVLC database. | Each vehicle is matched by a computer with the DVLC database. |
| 8 | It prints off a letter to the vehicle owners using mailmerge. | A letter is printing off to the vehicle owners using mailmerge. |

6. With the help of this diagram, sequence these steps in the operation of an EPOS till. Then write a description of its operation in the Present passive.

|  |  |  |
| --- | --- | --- |
| 1 | The checkout operator scans the item. | The item is scanned by the checkout operator. |
| 2 | The scanner reads the barcode. | The barcode is read by the scanner. |
| 3 | The scanner converts the barcode into electrical pulses. | The barcode is converted into electrical pulses by the scanner. |
| 4 | The scanner sends the pulses to the branch computer. | The pulses are sent to the branch computer by the scanner. |
| 5 | The branch computer searches the stock file for a product matching the barcode EAN. | The stock file is searched by the branch computer for a product matching the barcode EAN. |
| 6 | The branch computer sends the price and description of the product to the EPOS till. | The price and description of the product are sent to the EPOS till by the branch computer. |
| 7 | The till shows the item and price. | The item and price are shown by the till. |
| 8 | The branch computer records the sale of the product. | The sale of the product is recorded by the branch computer. |
| 9 | The till prints the item and price on the paper receipt. | The item and price are printed on the paper receipt by the till. |

**Problem solving**

7. Assuming cost is not a problem, what computer applications would make today's cars safer, more comfortable, more secure and more efficient? List your ideas; then compare ideas with others in your group.

Such computer applications could be the program systems based on modern researches and developments in artificial intellect and machine vision. These applications have already begun to be used in testing autonomous car systems.

**Speaking**

8. Be prepared to describe the process shown in your diagram to your partner. Take notes on the process described to you. Ask your partner to repeat or explain further if you do not understand any of the steps in his/her description. If you prefer, you may describe another computing process you are familiar with.

**Writing**

9. Write a description of the process you described in Task 8.

The described process is a process of cash withdrawing from an ATM. The bankcard holder inserts his bankcard into an ATM. The ATM reads data from the card's chip and requests the user's pin code to identify the user and the bank account. The user inputs the pin code and if it is correct, the ATM suggests to input the amount of cash the user wants. After the user inputs the amount, the ATM requests the appropriate transaction to the cardholder's bank. The bank computer gets information about the card's account, and if the balance of the card's account allows, funds electronically the requested amount to the ATM host bank account. Once the fund transfer is successfully completed, the ATM dispenses cash to the cardholder.

**Specialist reading**

A. Find the answers to these questions in the following texts.

|  |  |  |
| --- | --- | --- |
|  | Question | Answers |
| 1 | What tool is often used in data mining? | The tool is often used in data mining is an Artificial Intellect. |
| 2 | What Al method is used for the following processes? |  |
| 2a | Separate data into subsets and then analyse the subsets to divide them into further subsets for a number of levels. | For dividing data into subsets is used a method called ‘Decision tree’. |
| 2b | Continually analyse and compare data until patterns emerge. | This class of tasks is handled by means of Neural Networks. |
| 2c | Divide data into groups based on similar features or limited data ranges. | This method called ‘Clusters’ |
| 3 | What term is used for the patterns found by neural networks? | The term used for patterns found by a Neural Network calls ‘Rules’. |
| 4 | When are clusters used in data mining? | Clusters are used when data is not labelled in the way that favorable to mining. |
| 5 | What types of data storage can be used in data mining? | In data mining can be used all types of data storage from large data warehouses to small desktop databases and flat files. |
| 6 | What can an analyst do to improve the data mining results? | For improving the data mining results an analyst can refine parameters, use other analytical tools or scrap the data if it is unusable. |
| 7 | Name some of the ways in which data mining is currently used | Data mining is used in analyzing Supreme Court decisions, discovering patterns in health care, pulling stories about competitors from newswires, resolving bottlenecks in production processes, and analyzing sequences in the human genetic makeup. |

B1. Match the terms in Table A with the statements in Table B.

Table A

|  |  |
| --- | --- |
| a | Data mining |
| b | AI |
| c | Cleansed data |
| d | Data warehouse |

Table B

|  |  |
| --- | --- |
| I | Storage method of archiving large amounts of data to make it easy to access |
| II | Data free from duplicate and erroneous information |
| III | A process of filtering through large amounts of raw data for useful information |
| IV | A computing tool that tries to operate in a way similar to the human brain |

Answers

|  |  |
| --- | --- |
| Storage method of archiving large amounts of data to make it easy to access | Data warehouse |
| Data free from duplicate and erroneous information | Cleansed data |
| A process of filtering through large amounts of raw data for useful information | Data mining |
| A computing tool that tries to operate in a way similar to the human brain | AI |

B2. Mark the following statements as True or False:

|  |  |  |
| --- | --- | --- |
| a | Data mining is a process of analyzing known patterns in data. | False |
| b | Artificial intelligence is commonly used in data mining. | True |
| c | In data mining, patterns found while analyzing data are used for further analyzing the data. | True |
| d | Data mining is used to detect false insurance claims. | True |
| e | Data mining is only useful for a limited range of problems. | False |

B3. Complete the following description of the data mining process using words from the text:

Large amounts of data stored in data warehouses are often used for data mining.

The data is first cleansed to remove duplicated information and errors.

The data is then analyzed using a tool such as neural network.

An analysis report is then analyzed by an analyst who decides if the parameters need to be refined, other data analysis tools need to be used, or if the results need to be discarded because they are unusable.

The analyst passes the final results to the decision makers who decide on the appropriate action.