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**TABA 2023/2024 Software Development**

Sergio Vinicio da Silva Oliveifra

06/01/204

**1. a) URLGenerator.java**

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**\*\* The application prompts the user to provide one single line**

**\*\* of text with the name of the company, for example:**

**\*\* Meta Platforms Inc, Google LLC, Amazon Inc., Deloitte Touche Tohmatsu Ltd.**

**\*\* (Please note that you are not required to validate the input,**

**\*\* we assume that the input is well formed.)**

**\*\* Next, the application uses the given company name to generate/create**

**\*\* the corresponding URL containing a Protocol, Hostname, and Path.**

**\*\* The URL is created using several rules.**

**\*/**

**/\***

**\*\* Protocol -> https:**

**\*\* Hostname -> moodle2023.ncirl.ie**

**\*\* Path -> course/view.php?id=768**

**\*/**

**/\***

**\*\* Examples:**

**\*\***

**\*\* ftp://Google\_LLC.org/FAQ**

**\*\* ftp://Deloite\_Touche\_Tohmatsu\_Ltd.edu/FAQ**

**\*\* ftp://Monsters\_Inc.edu/bio**

**\*\* coap://Meta\_Ltd.edu/bio**

**\*/**

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**\* TABA 2023/2024**

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**\*/**

**public class URLGenerator**

**{**

**//DECLARE VARIABLES**

**private String companyName; //input**

**private String url; //output**

**//Using in Rule (a), (e) and (f)**

**private String newCompanyName;**

**//Using in Rule (c)**

**private StringBuffer strBuff;**

**//Using in Rule (e)**

**private int numConsonants;**

**char vowel;**

**//Using in Rule (f)**

**int numPairsVowel = 0;**

**char currentChar; //using to identify the pairs (i)**

**char nextChar; //close to each other (i + 1)**

**int length;**

**//CONSTRUCTOR**

**public URLGenerator()**

**{}**

**//COMPUTE METHOD**

**//Rule (a) URL Protocol:**

**//Replace "Meta" to "coap", otherwise "ftp"**

**public void urlProtocol()**

**{**

**if(companyName.toLowerCase().contains("meta"))**

**{**

**url = "coap://" + companyName;**

**}**

**else**

**{**

**url = "ftp://" + companyName;**

**}**

**}**

**//Rule (b) Hostsname:**

**//Replace incorporated, limited or limited liability company to**

**//"Inc", "Ltd" or "LCC"**

**public void urlHostName()**

**{**

**//strBuff = new StringBuffer(url);**

**for(int i = 0; i < url.length(); i ++)**

**{**

**if (url.toLowerCase().contains("incorporated"))**

**{**

**url = url.replace("incorporated", "Inc");**

**}**

**else if (url.toLowerCase().contains("limited liability company"))**

**{**

**url = url.replace("limited liability company", "LCC");**

**}**

**else if (url.toLowerCase().contains("limited"))**

**{**

**url = url.replace("limited", "Ltd");**

**}**

**}**

**}**

**//Rule (c) Hostsname:**

**//Replace space to underscore "\_"**

**public void newUrlHostname()**

**{**

**strBuff = new StringBuffer();**

**for(int i = 0; i < url.length(); i++)**

**{**

**if (url.charAt(i) == ' ')**

**{**

**strBuff.append('\_');**

**}**

**else**

**{**

**strBuff.append(url.charAt(i));**

**}**

**}**

**newCompanyName = strBuff.toString();**

**}**

**//Rule (d) Hostsname:**

**//Don't change the name**

**//Rule (e) Hostsname:**

**//Company's names has a total of consonants:**

**public void Consonants()**

**{**

**for (int i = 0; i < companyName.length(); i++)**

**{**

**char vowel = companyName.charAt(i);**

**if(vowel == 'a' || vowel == 'e' ||**

**vowel == 'i' || vowel == 'o' || vowel == 'u')**

**{**

**//System.out.println(companyName);**

**//System.out.println("check the method and number");**

**}**

**else if(vowel != ' ')**

**{**

**numConsonants++;**

**}**

**}**

**//odd number of consonants, add ".org" at the end**

**if(numConsonants % 2 != 0)**

**{**

**//System.out.println("\* Since the number of consonants is odd, " +**

**// "\nit was included: '.org' at the end of your hostname.");**

**newCompanyName += ".org";**

**}**

**//even number of consonants, add ".edu" at the end**

**else**

**{**

**//System.out.println("\* Since the number of consonants is even, " +**

**// "\nit was included: '.edu' at the end of your hostname." );**

**newCompanyName += ".edu";**

**}**

**}**

**//Rule (f) Pairs of Vowels:**

**//Count the number of pairs of vowels next to each other:**

**public void PairsOfVowels()**

**{**

**numPairsVowel = 0;**

**for(int i = 0; i < companyName.length() - 1; i++)**

**{**

**currentChar = Character.toLowerCase(newCompanyName.charAt(i));**

**nextChar = Character.toLowerCase(newCompanyName.charAt(i + 1));**

**if ("aeiouAEIOU".indexOf(currentChar) != -1 && "aeiouAEIOU".indexOf(nextChar) != -1)**

**{**

**numPairsVowel++;**

**}**

**}**

**// for 0 add "/bio"**

**if (numPairsVowel == 0)**

**{**

**newCompanyName = newCompanyName + "/bio";**

**//System.out.println("\nThe number of pairs of vowels is: " + numPairsVowel);**

**//System.out.println("For this reason, I added '/bio' at the end.");**

**}**

**// from 1 to 3 add "/FAQ"**

**else if (numPairsVowel <= 3)**

**{**

**newCompanyName = newCompanyName + "/FAQ";**

**//System.out.println("\nThe number of pairs of vowels is: " + numPairsVowel);**

**//System.out.println("In this case, I added '/FAQ' at the end.");**

**}**

**//from 3 up add "/Glossary"**

**else if (numPairsVowel > 3 )**

**{**

**//System.out.println("\nThe number of pairs of vowels is: " + numPairsVowel);**

**//System.out.println("Uau, it's 'Glossary' added at the end.");**

**newCompanyName = newCompanyName + "/Glossary";**

**}**

**}**

**//SETTERS**

**public void setCompanyName(String companyName)**

**{**

**this.companyName = companyName;**

**}**

**public void setNewCompanyName(String newCompanyName)**

**{**

**this.newCompanyName = newCompanyName;**

**}**

**public void setUrl(String url)**

**{**

**this.url = url;**

**}**

**public void setVowel(char vowel)**

**{**

**this.vowel = vowel;**

**}**

**public void setNumConsonants(int numConsonants)**

**{**

**this.numConsonants = numConsonants;**

**}**

**public void setNumPairsVowel(int numPairsVowel)**

**{**

**this.numPairsVowel = numPairsVowel;**

**}**

**//GETTERS**

**public String getCompanyName()**

**{**

**return companyName;**

**}**

**public String getNewCompanyName()**

**{**

**return newCompanyName;**

**}**

**public String getUrl()**

**{**

**return url;**

**}**

**public char getVowel()**

**{**

**return vowel;**

**}**

**public int getNumConsonants()**

**{**

**return numConsonants;**

**}**

**public int getNumPairsVowel()**

**{**

**return numPairsVowel;**

**}**

**}**

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**1. b) URLGeneratorApp.java**

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**\*\* The application prompts the user to provide one single line**

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**\*/**

**/\*\***

**\* @author Sergio Oliveira**

**\* TABA 2023/2024**

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**\* Student ID: x23170981@student.ncirl.ie**

**\*/**

**import java.util.Scanner;**

**public class URLGeneratorApp**

**{**

**public static void main(String[] args)**

**{**

**//DECLARE VARIABLES**

**String companyName; //input**

**String url; //output**

**int urlQty; //Part (b), my last digite is 1. Approach ID: MCNA1**

**String newCompanyName[];**

**//declare and create the object**

**URLGenerator myU = new URLGenerator();**

**Scanner sc = new Scanner(System.in);**

**//INPUT**

**//Welcome Msg**

**System.out.println("\nThis is TABA 2023 by Sergio Oliveira" +**

**"\nWelcome to the Url Generator!");**

**//Approach ID: MCNA1 -> Ask the user how many URLs they would like to generate**

**do**

**{**

**System.out.println("How many URLs would you like to generate?");**

**urlQty = sc.nextInt(); //User inputs a number, program stores it**

**sc.nextLine();**

**if(urlQty < 0)**

**{**

**System.out.println("Opps! Invalid Input.");**

**System.out.println("Please enter a positive number.\n");**

**}**

**else if (urlQty > 3) //I need to change to a another number**

**{**

**System.out.println("Are you sure about this number?");**

**System.out.print("Type 'y' or 'Y' for Yes or anything else for No."); //I ne**

**char c = sc.next().charAt(0);**

**if(c == 'y' || c== 'Y')**

**{**

**sc.nextLine();**

**break;**

**}**

**}**

**}**

**while(urlQty < 0 );**

**//My Array**

**newCompanyName = new String[urlQty];**

**//User enters the Company Name**

**for(int i = 0; i < urlQty; i++)**

**{**

**System.out.println("\nPlease enter your Company Name #" + (i + 1) + ":");**

**newCompanyName[i] = sc.nextLine();**

**}**

**System.out.println("\nHere is a summary and the URLs that were generated:\n");**

**//OUTPUT**

**for(int i = 0; i < urlQty; i++)**

**{**

**myU.setCompanyName(newCompanyName[i]);**

**myU.urlProtocol();**

**myU.urlHostName();**

**myU.newUrlHostname();**

**myU.Consonants();**

**myU.PairsOfVowels();**

**//Introduction**

**System.out.println("\n--------");**

**System.out.println("#" + (i + 1));**

**System.out.println("The Company Name: " + myU.getCompanyName());**

**System.out.println("URL-> " + myU.getNewCompanyName() + "\n");**

**//Rule (all) here is the final answer**

**//System.out.println(myU.getNewCompanyName() + "\n");**

**//Introduction to explanation**

**System.out.print("This URL was created using these rules:\n");**

**//Explaing the rule (e)**

**//myU.Consonants();**

**if (myU.getNumConsonants() % 2 != 0)**

**{**

**System.out.println("\* Since the number of consonants is odd, " +**

**"\nit was included: '.org' at the end of your hostname.");**

**}**

**else**

**{**

**System.out.println("\* Since the number of consonants is even, " +**

**"\nit was included: '.edu' at the end of your hostname." );**

**}**

**//Explaing the rule (f)**

**myU.PairsOfVowels();**

**System.out.println("\n\* The number of pair of vowel is: " + myU.getNumPairsVowel());**

**if (myU.getNumPairsVowel() == 0)**

**{**

**System.out.println(" For this reason, I added '/bio' at the end.");**

**}**

**else if (myU.getNumPairsVowel() <= 3)**

**{**

**System.out.println(" In this case, I added '/FAQ' at the end.");**

**}**

**else if (myU.getNumPairsVowel() > 3)**

**{**

**System.out.println(" Wow, 'Glossary' was added at the end.");**

**}**

**}**

**System.out.println("\nThis was TABA Software Development 2023/2024" +**

**"\nBy Sergio Oliveira ID: 23170981\n");**

**}**

**}**

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**2.**

Colour palette, fonts used, buttons used etc. Lots of images and reasons why certain things were done the way they are presented on your website. Show wireframes for each web page and reference at least one design pattern per wireframe.

**4. Testing & Responsiveness**

Talk about website responsiveness here along with **Optimisation, SEO and Testing**. You can talk about how you made your website responsive. You could also mention how you used JavaScript: loops, if statements, etc. How you deployed your website?

**5. Conclusion**

Overview of how the project went, did you work together well as a team? What was difficult to do, how you feel the website looks and if you had time, would you make any changes?

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**6. References**

Finance, B. &., 2015. *Flexible working worth €2.5bn to Irish economy.*[Online]    
Available at: http://businessandfinance.com/news/flexible-working-worth-e2-5bn-to-irish-economy/    
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