**ARMY PUBLIC SCHOOL, KOLKATA**

ELECTRICITY BILL ING MANAGEMENT



For AISSCE 2020-21 Examination

**ELECTRICITY BILLING MANAGEMENT SYSTEM**



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**CLASS**  : **12-SC-1**

**SESSION** : **2020-2021**

**AISSCE ROLL NO** :

CERTIFICATE

This is to certify that the following students of

CLASS 12-SC-1 have prepared the report on the project

ELECTRICITY BILLING MANAGEMENT SYSTEM

The report is the result of their efforts & endeavours. The report is found worthy of acceptance as final project report for the subject Computer Science of Class XII.

They have prepared the report under my guidance.

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Acknowledgement

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**With Thanks,**

* ***DHRUVA SHAW***
* ***AYUSH SAHA***
* ***SMYAN KOTKAR***

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MODULES USED

1. **Inbuilt modules** :

* **sys** : The system module is used to close the interpreter programmatically using sys.exit()
* **mysql-connector** : This module is used to perform the backend operations with the MySQL database.
* **os**  : This module is imported in the program clear the terminal screen programatically, get the current working directory and make the program Operating System independent.
* **json** : This module is used to import data from .json files to the program.
* **math** : From this module the ceil function is imported to roundoff the generated value for the electric bill.
* **smtplib** : This module is imported to send the electric bills to respective customer.
* **email** : This module is imported to work accordance with smtplib module and ease the template making of the emails.
* **datetime** : This module is imported to get the current time.
* **csv**  : This module is imported to read and write the csv files.
* **hashlib** : This module is imported to hash the password using the md5 hash algorithm and return the hash in a hexadecimal number
* **time** : From this module sleep function is imported to suspend execution of the calling thread for the given number of seconds
* **cProfile** : This module is to provide a deterministic profiling of the python program
* **re** : From the regular expression module compile function imported and is used to compile a regular expression pattern into a regular expression object

1. **Custom (user made) Modules**

* **adminBillGen** : This contains function for the Admin Homepage.
* **clearscreen** : This contains the function for the clearscreen based on the operating system.
* **customerView** : This contains the function for the billing the view bill and this is accessible to customer only.
* **billEmail** : This contains the function for the emailing the bill to respective customer.
* **billGen** : This contains the function for to generat the bill for the corresponding month.
* **login** : This function to logged into the user in correct department.
* **logout** : This contains the function to logout the user.

WORKING DESCRIPTION