مدرسة القديسة مريم الكاثوليكية الثانوية - دبي

ST. MARY'S CATHOLIC HIGH SCHOOL, DUBAI

Theory

YEAR 8 – Computing (Week4)-2021-2022

Subject	**Computing**
Class/ Section	**Year 8A-F**
Week	**19th September to 23rd September**
Work send to students by	**Google classroom**
Total number of lessons per week	**2**
Unit/ Topic:	**– Computational thinking (Chapter 1)** **1.3 Exhaustive search algorithms**
Key Vocabulary	Exhaustive search, Abstraction, Route , Optimal solution
Lessons 1 –Live Zoom lesson along with face to face instruction for students present on a particular day **Work will be assigned in google classroom which will be matched to the students ability.**	**Specific Learning objectives:** • Understand what is Abstraction and Exhaustive Search. • Design an Exhaustive search algorithm. • Give examples using Abstraction and Exhaustive Search. **Specific Intended Learning Outcomes** • Students will be able to understand what is Abstraction and Exhaustive Search. • Students will be able to design an Exhaustive search algorithm. • Students will be able to do examples using Abstraction and Exhaustive Search.

Tasks/Activities	The teacher would explain what are Abstraction and the need of Exhaustive Search. Students will explore it by comparing with real life experience by finding travel route in Google maps. Then teacher will continue the lesson by taking some sample task and finding optimal solution from all possibilities routes available. Students will be put in break out rooms during Zoom lesson to encourage collaborative learning.
Assessment Criteria/ Essential questions	Essential tasks that are according to curriculum: • Create an abstraction of the route using exhaustive search algorithm for a given Map.
Resources	1. Matrix Computing for 11-14 -2 Page No 16 to 19 2. PowerPoint presentation on the topic

Practical

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Total number of lessons per week	**2**
Unit/ Topic:	**– Computational thinking (Chapter 1)** **1.3 Exhaustive search algorithms**
Key Vocabulary	Exhaustive search, Abstraction, Route , Optimal solution
Lessons 2 –Live Zoom lesson along with face to face instruction for students present on a particular day **Work will be assigned in google classroom which will be matched to the students ability.**	**Specific Learning objectives:** • Design an Exhaustive search algorithm. • Give examples using Abstraction & Exhaustive Search. **Specific Intended Learning Outcomes** • Students will be able to design an Exhaustive search algorithm in practical. • Students will be able to do examples using Abstraction & Exhaustive Search in practical.
Tasks/Activities	Students will explore to create an abstraction of the route using exhaustive search algorithm for a given Map. Student will complete the worksheet uploaded in Google classroom using Algorithm with Iteration.
Assessment Criteria/ Essential questions	Essential tasks that are according to curriculum:

	• Work out the exhaustive search algorithm to get optimal solution from Point A to Point C for the following route. (**hint**: the distance are given in between places) • Work out the exhaustive search algorithm to get optimal solution for the given route. (**hint**: The distance are given in between places. If starting and ending places are not given, we have to start from any one place and visit each place exactly one time and return back to same place.) Assessment objectives expected by the curriculum with respect to the above question is listed below. Obj1: Apply Exhaustive search. Obj2: Finding optimal solution.
Resources	1. Matrix Computing for 11-14 -2 Page No 16 to 19 2. Worksheet on the topic