

DCI1013: PROBLEM SOLVING

Tutorial 2

by

Noor Azida Binti Sahabudin
Faculty of Computer Systems & Software Engineering
azida@ump.edu.my



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Case Study 1

Excellent School in one of private school in Kuantan. These school have about 300 students per year. Usually, in early of year (January) parents are come to school to do the payment. Since these school is using manual method for payment, parents need to que and this is waste their time. Create the computerized system to replace the manual calculation. Below is information about the rate of charge for each category of students.

| Year | Fees / Month (RM) | Text Book / Year (RM) | Sport Uniform / Year (RM) | |
|------|-------------------|-----------------------|---------------------------|------|
| | | | Boy | Girl |
| 1 | 120 | 30 | 10 | 12 |
| 2 | 130 | 30 | 10 | 12 |
| 3 | 140 | 40 | 15 | 17 |
| 4 | 150 | 40 | 15 | 17 |
| 5 | 160 | 50 | 18 | 20 |
| 6 | 170 | 50 | 18 | 20 |

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Hint: Please refer notes “General Problem Solving Concept” (Chapter 3)

Case Study 1

Example output for these case study as below:

| RECEIPT: EXCELLENT SCHOOL | |
|---------------------------|------------------------|
| Parent Name: | Abdullah Bt Solahuddin |
| Child Name: | Rayyan Bin Abdullah |
| Year: | 3 |
| Fees: | RM140 |
| Text Book: | RM40 |
| Sport Uniform: | RM15 |
| Total Charge: | RM195 |

- Construct the PAC
- Construct the interactivity chart
- Construct the IPO based on answer in (b)

Hint: Please refer notes “General Problem Solving Concept” (Chapter 3)



Case Study 2

Clinic Hijrah provide services for medical checkup. The rate for local and foreigner is different. Usually, the medical checkup is for students that want to continue their study or new worker. The customer can choose either want to check x-ray, blood test, or urine test. Below is information about the rate of charge for each category.

| Category | Citizen (RM) | X-Ray (RM) | Blood test (RM) | Urine test (RM) |
|------------------------|--------------|------------|-----------------|-----------------|
| Student Continue Study | Local | 60 | 30 | 40 |
| | Foreigner | 80 | 40 | 50 |
| New Worker | Local | 80 | 30 | 45 |
| | Foreigner | 120 | 40 | 55 |

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Hint: Please refer notes “General Problem Solving Concept” (Chapter 3)

Case Study 2

The Clinic Hijrah are using manual calculation for the payment. Create the computerized system to replace the manual calculation. Example output for these case study as below:

| RECEIPT: CLINIC HIJRAH | |
|------------------------|---------------------|
| Name: | Erna Rania Bt Ahmad |
| Category: | Student |
| Citizen: | Local |
| X-Ray: | RM60 |
| Blood Test: | RM0 |
| Urine Test: | RM40 |
| Total Charge: | RM100 |

- Construct the PAC
- Construct the interactivity chart
- Construct the IPO based on answer in (b)

Hint: Please refer notes “General Problem Solving Concept” (Chapter 3)



Author Information

NOOR AZIDA BINTI SAHABUDIN

Senior Lecturer

Faculty of Computer Systems & Software Engineering

Universiti Malaysia Pahang

PhD in Educational Technology