

# PORTFOLIO

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- SAP UNIVERSITY CHALLENGE 2021
- CHALLENGE NOVA SCOTIA



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# Part 1.

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## Introduction



# 1.1 WHERE AM I NOW?

## *EDUCATION & WORK HISTORY*



### **1998 - 2002 | Bachelor of Arts Degree | Dankook University | South Korea**

- Major: Communication & Media
- Minor: German Language & Literature



### **2003 - 2006 | Writer | MBC Broadcasting Company | South Korea**

- Organized the flow of each episode logically
- This program ranked in the top 5 in viewer ratings.



### **2020 - 2022 | Diploma in IT Database Administration | Nova Scotia Community College**

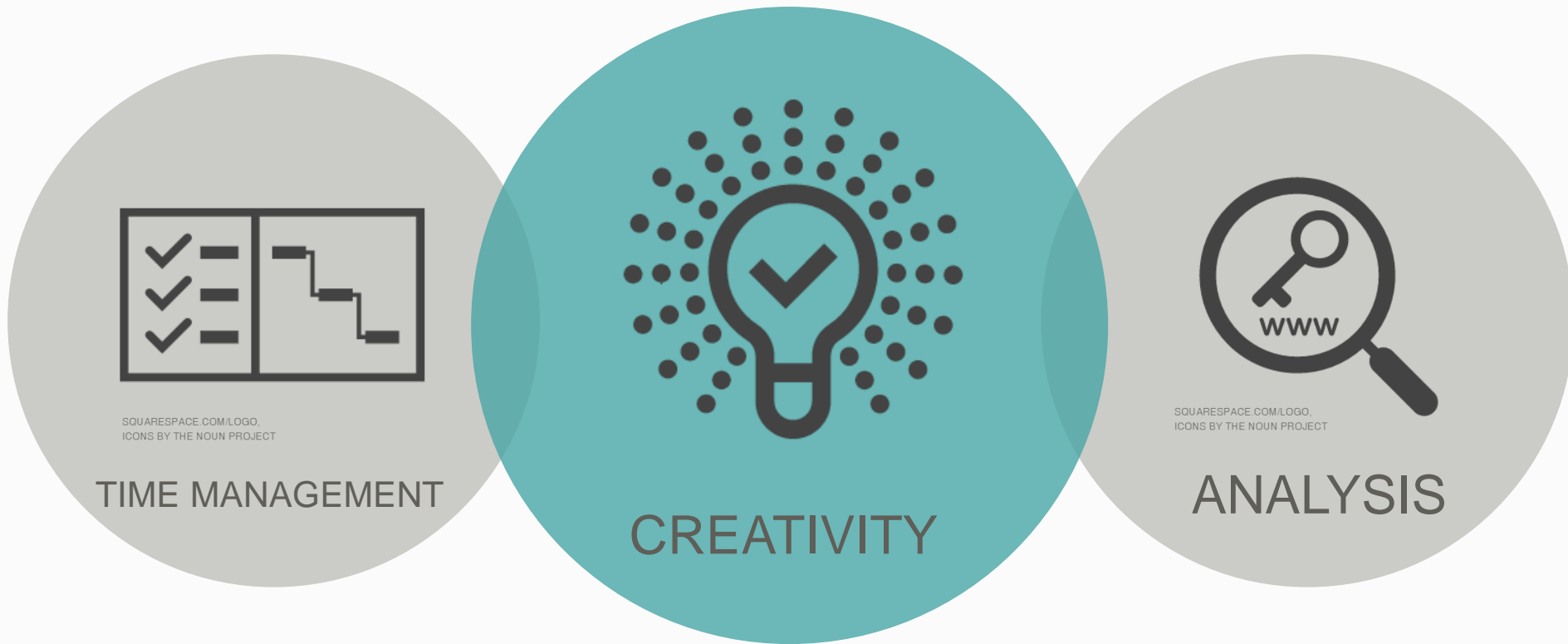
- Courses including Programming (server & client side), Database Management, Networking, Business Analysis
- Awarded first-place in the Halifax Innovation Challenge 2021



### **2021 | Summer Internship | Anti-Human Trafficking Intelligence Initiative (ATII)**

- Performed data integration and normalization from human traffickers' financial information
- Researched and collected data using an Open-Source Intelligence

## 1.2 MY SOFT SKILLS



## 1.3 MY TECHNICAL SKILLS

SQL



PYTHON



JAVA



HTML & CSS



LINUX



POWERSHELL



# Part 2.

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## MYWORK SAMPLES



# 2.1 DATA SECURITY – SECURITY AUDIT

## 4. RECOMMENDATION

### Issue 1. Tablespace – Allocate More Space for a Database

I will try the following actions to allocate more space for current tablespaces:

- Add datafiles to tablespaces for the USERS tablespace
- Increase the size of a datafile for the SYSTEM tablespace
- Create new tablespaces

#### Add datafiles to tablespaces for the USERS tablespace



The USERS tablespace has only one datafile named USERS01.DBF and over 88% of space is already used. I will add one more datafile for this tablespace and increase the disk space for a better flexibility. I will use the pseudo-code below.

```
ALTER TABLESPACE "USERS" ADD DATAFILE 'C:\APP\VMUSER\ORADATA\ITDB\USERS02.DBF' SIZE 100M
```

You can see that USERS tablespace has two datafiles now.



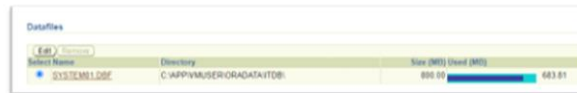
#### Increase the size of a datafile for the SYSTEM tablespace

Tablespace Name	Directory	Size (MB)	Used (MB)
SYSTEM01.DBF	C:\APP\VMUSER\ORADATA\ITDB	682.8	682.8

The SYSTEM tablespace has only one datafile named SYSTEM01.DBF. The allocated size is 690 MB, and 682.8 MB is used currently. I will resize the size of datafile for more space and change to extend automatically when datafile is full. I will use the pseudo-code below.

```
ALTER DATABASE DATAFILE 'C:\APP\VMUSER\ORADATA\ITDB\SYSTEM01.DBF' RESIZE 800M  
ALTER DATABASE DATAFILE 'C:\APP\VMUSER\ORADATA\ITDB\SYSTEM01.DBF' AUTOEXTEND ON NEXT 10M
```

You can see the SYSTEM tablespace has extended to 800MB now.



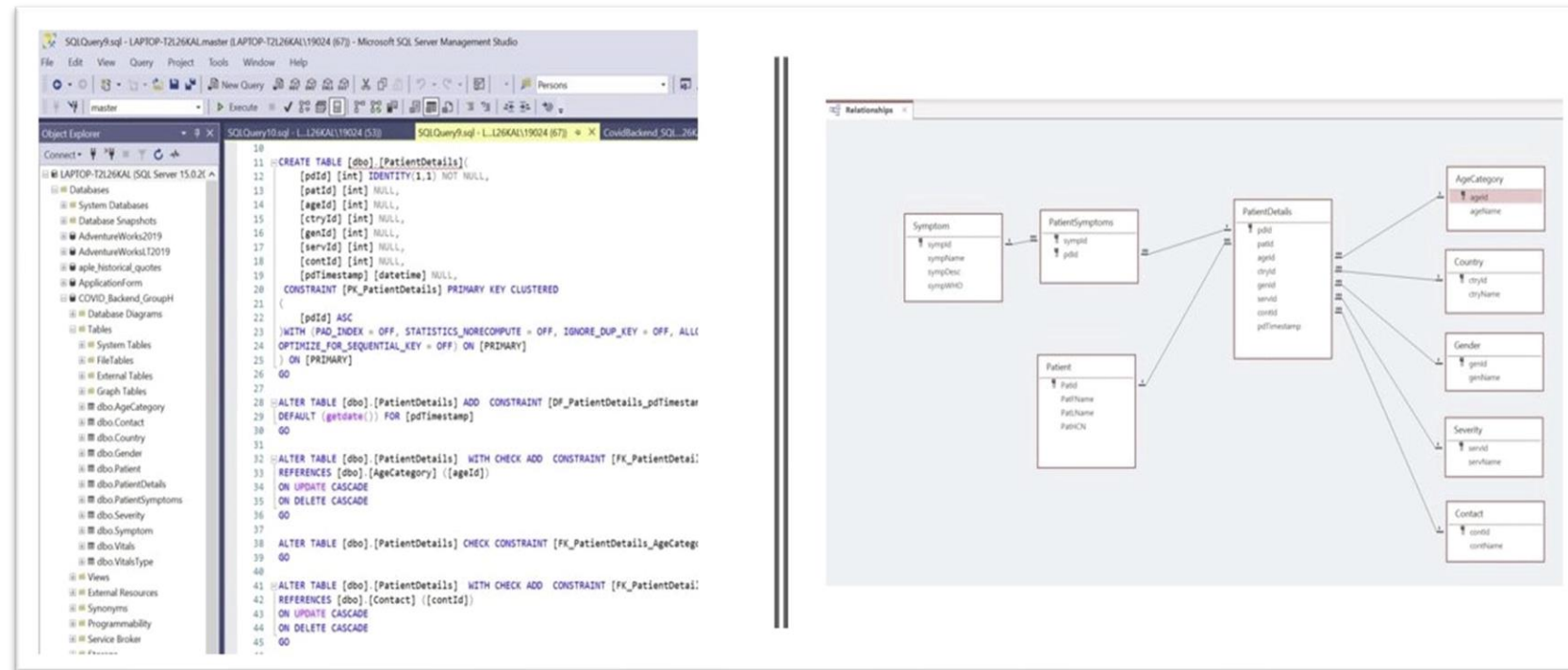
Moreover, I added one more datafile named SYSTEM02.DBF inside SYSTEM tablespace.



In this project, I analyzed hypothetical security issues for the Clearwater Trader company and made recommendations by implementing applicable testing plans. I have got a perfect mark for this work and my instructor Bill Cunningham highly recommended adding this project to my portfolio. As a DBA, I demonstrated my scheme for evaluating the user threat / risk level and efficient memory allocation through this document.



## 2.2 SQL – COVID-19 ANALYSIS PROJECT

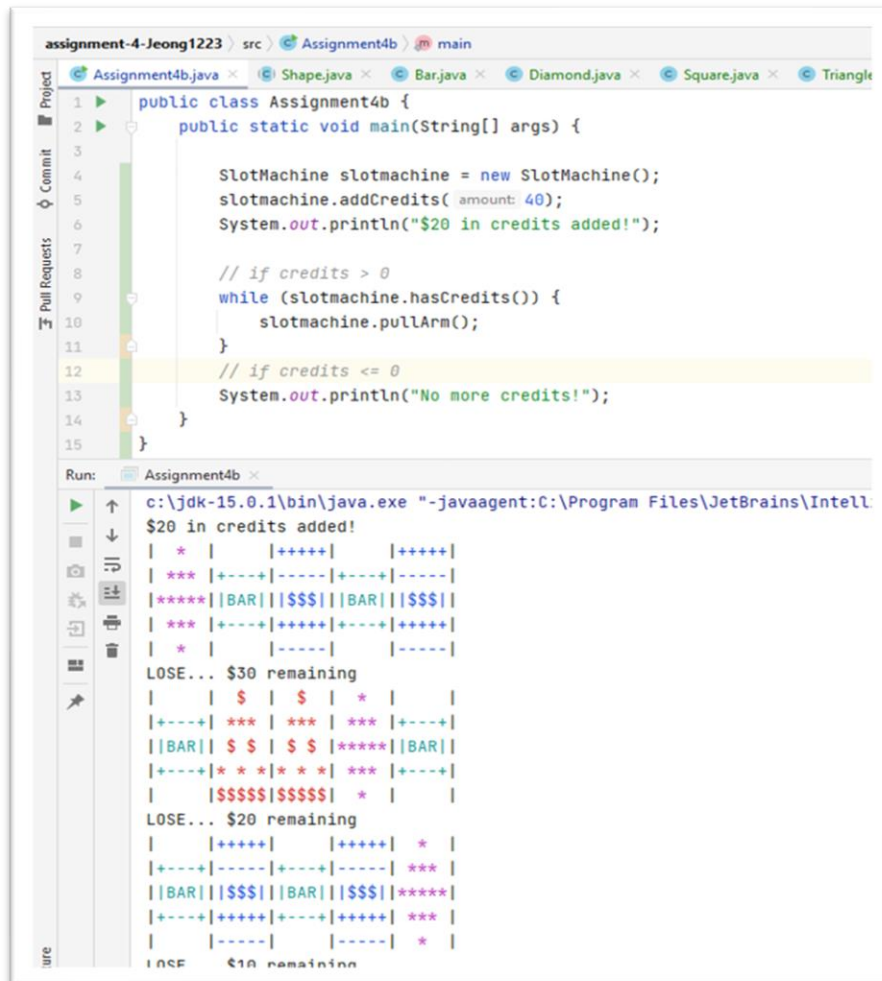


The screenshot displays the SQL Server Enterprise Manager interface. On the left, the 'Object Explorer' shows the database structure, including tables like 'AgeCategory', 'Country', 'Gender', 'Severity', and 'Contact'. The central pane shows the 'Relationships' tab, illustrating the Entity Relationship Diagram (ERD) with tables and their attributes. The right pane shows the T-SQL code for creating and altering the 'PatientDetails' table.

```
10 CREATE TABLE [dbo].[PatientDetails](
11     [pId] [int] IDENTITY(1,1) NOT NULL,
12     [patId] [int] NULL,
13     [ageId] [int] NULL,
14     [ctryId] [int] NULL,
15     [genId] [int] NULL,
16     [servId] [int] NULL,
17     [contId] [int] NULL,
18     [pdTimestamp] [datetime] NULL,
19     CONSTRAINT [PK_PatientDetails] PRIMARY KEY CLUSTERED
20     (
21         [pId] ASC
22     )
23     WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLI
24     OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
25 ) ON [PRIMARY]
26 GO
27
28 ALTER TABLE [dbo].[PatientDetails] ADD CONSTRAINT [DF_PatientDetails_pdTimestar
29     DEFAULT (getdate()) FOR [pdTimestamp]
30 GO
31
32 ALTER TABLE [dbo].[PatientDetails] WITH CHECK ADD CONSTRAINT [FK_PatientDetail:
33     REFERENCES [dbo].[AgeCategory] ([ageId])
34     ON UPDATE CASCADE
35     ON DELETE CASCADE
36 GO
37
38 ALTER TABLE [dbo].[PatientDetails] CHECK CONSTRAINT [FK_PatientDetails_AgeCatego
39 GO
40
41 ALTER TABLE [dbo].[PatientDetails] WITH CHECK ADD CONSTRAINT [FK_PatientDetail:
42     REFERENCES [dbo].[Contact] ([contId])
43     ON UPDATE CASCADE
44     ON DELETE CASCADE
45 GO
46
```

In the 'Transactional Database Programming' course, I created the Entity Relationship Diagram (ERD) and database with Covid-19 raw data of the Kaggle site. Through the analysis, I established relationships between entities keeping data integrity and normalization. I demonstrated building a database using Data Manipulation Language (DML) and Data Definition Language (DDL) proficiently.

## 2.3 JAVA – BUILD A CRAPPY SLOT MACHINE

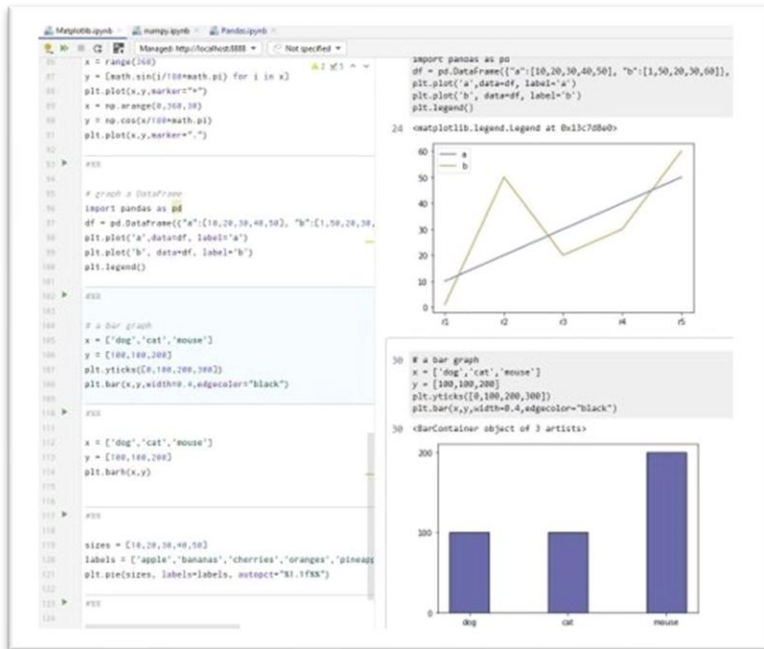


```
assignment-4-Jeong1223 > src > Assignment4b > main
Assignment4b.java x Shape.java x Bar.java x Diamond.java x Square.java x Triangle
1 public class Assignment4b {
2     public static void main(String[] args) {
3
4         SlotMachine slotmachine = new SlotMachine();
5         slotmachine.addCredits( amount: 40);
6         System.out.println("$20 in credits added!");
7
8         // if credits > 0
9         while (slotmachine.hasCredits()) {
10             slotmachine.pullArm();
11         }
12         // if credits <= 0
13         System.out.println("No more credits!");
14     }
15 }

Run: Assignment4b x
c:\jdk-15.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\Intell
$20 in credits added!
| * | |++++| |++++| | | |
| *** |+---+|+---+|+---+|
|*****|BAR| |$$$| |BAR| |$$$|
| *** |+---+|++++|+---+|++++|
| * | |----| |----|
LOSE... $30 remaining
| $ | $ | * | | |
|+---+| *** | *** | *** |+---+|
|BAR| $ $ $ $ *****|BAR|
|+---+|* * * * *| *** |+---+|
| $$$$|$$$$$| * |
LOSE... $20 remaining
|++++| |++++| * | | | | |
|+---+|+---+|+---+|+---+| *** |
|BAR| |$$$| |BAR| |$$$| *****|
|+---+|++++|+---+|++++| *** |
| |----| |----| * |
LOSE... $10 remaining
```

At the first time I learned about the Object-Oriented Programming (OOP) concept, it was unfamiliar and difficult for me, but I was able to understand essential core concepts of Java through my hard work and practices. Through this final project, I demonstrated my understanding of method, object and class, inheritance, and polymorphism and I have got a full mark.

## 2.4 PYTHON – PANDAS & MATPLOTLIB



```
names = df.set_index('ID', drop=False)
names.loc['W0902474']
```

ID	Program	Enrolled	StartDate	Tuition	Paid
W0902474	IT Programming	True	2018-09-01	3620	1095

```
# drop row
# delete columns to be used as the new index.
names = df.set_index('ID', drop=False)
names.loc['W0902474']
names.head()
```

ID	Program	Enrolled	StartDate	Tuition	Paid
W0120535	IT Cyber Security	True	2020-09-01	3620	1713
W0753797	IT Data Analytics	True	2020-09-01	3620	2038
W0902474	IT Programming	True	2018-09-01	3620	1095
W0011041	IT Systems Management Networking	False	2020-09-01	3620	2436
W0514046	IT Programming	True	2020-09-01	3620	2431

```
names.loc[names['ID'] == 'W0902474']
```

ID	Program	Enrolled	StartDate	Tuition	Paid
W0902474	IT Programming	True	2018-09-01	3620	1095

I learnt about Numpy, Panda, and Matplotlib at the end of my Python course. They are widely used open-source Python libraries and data analysis tools. I learned just the introduction of them, but it was very impressive. This work sample is a basic level of code to show how they work for. I will keep learning to use these libraries and analyze my data visualization skills using Python.

# Part 3.

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## PROJECT & CERTIFICATION



# 3.1 PROJECT

HALIFAX INNOVATION CHALLENGE 2021 - Winner



Our group made a creative solution for redefining workplace with great teamwork.

We designed “Virtual Office” which can enhance our diversity, inclusion, and flexibility in hybrid workplace. These activities developed my communication skills and analytical thinking.

# 3.1 PROJECT

SAP UNIVERSITY CHALLENGE 2021 & CHALLENGE NOVE SCOTIA 2021



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## 3.2 CERTIFICATIONS



- Data Collection and Processing with Python | Coursera
- Tableau Essential Training | LinkedIn
- Querying Microsoft SQL Server 2019 | LinkedIn

# Part 4.

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## Conclusion





## 4.1 WHERE AM I GOING?

My team and I plan to develop our business plan for a capstone project for our last semester at NSCC. This project is based on our idea for the Challenge Nova Scotia 2021, and we are aiming to make a database for a non-profit organization.

I am open to working for various positions with my abilities like data analysis, data administration, and IT specialist. My major skills are establishing data logically on the backend side, but I also have a good sense of designing data. I hope to work in a place that offers ongoing training and learning.

Through the internship at Anti-Human Trafficking Intelligence Initiative, I experienced my abilities could be contributed to a better world. I hope to work with a company which tries to keep our humanity values using technologies.

## 4.2 HOW WILL I GET THERE?

### KEEP CONNECTING!

I will continue building social connections with people in the IT field on LinkedIn.

### KEEP LEARNING!

I am keeping learning and practicing my programming skills using Code Academy.

### KEEP BEING POSITIVE!

I am trying to keep a positive mind against the pressure about finding a job and hectic schedules.

### BE FLUENT IN ENGLISH!

I am making efforts to improve my communication skills in verbal and nonverbal.

# CONTACT

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