# Week 13 Lab 2 Practical

# Duties of a DBA - Backup and Restore

**Completing this worksheet will help prepare you for the next mini assessment. This is a checkpoint, you may work in pairs.**

1. **What are some common tasks a DBA can be expected to complete? For each also list how often they should occur**

* Installation of software

Occasionally

* Database maintenance

All the time

* Backup and recovery

All the time

* Handling of various data (types)

All the time

* Database security

All the time

* User authentication

Occasionally

* Performance monitoring

Occasionally

* Maximizing efficiency

Occasionally

1. **How would you automate your production backups?**

**SSMS** has a backup task you can automate in the maintenance plans section

1. **How would you check your backups to validate that they were successfully created?**

RESTORE VERIFYONLY option to check backup contents

1. **List the three backup models in SQL Server and the associated pros and cons.**

File backups, you get to back up individual files and the process will be generally faster than backing up a whole database. But the process of restoring will be trickier as you’ll have to find a way to get these files in the right spots.

Differential backups backs up data that was changed based on a full backup that already exists. Its fast and allows for frequent back ups.

Full backups are the simplest method of backing up as you’re backing up everything within. Doing this too often will overload servers and networks though, and you also need more storage space.

1. **List the two ways these backup models can be set (include any syntax)**

BACKUP DATABASE AdventureWorks

TO DISK = 'C:\AdventureWorks.BAK'

GO

**Let have a quick run through. Files on the I: drive and in Teams**

**Install the Pubs database on your containerised MSSQL Server (installpubs.sql).**

**Take a full backup of your Pubs database (make sure you have closed any query windows).**

**Insert the Pubs data.**

**Take a differential backup.**

**Insert a new author <YourName> (or update an existing author).**

**Take a differential backup.**

**Restore the full backup only (explore the Options and the Timeline)**

**Verify there is no data.**

**Restore the full backup + differential + transactions logs.**

**Confirm your data is in its most recent state.**

**DBCC CHECKDB for allocation or consistency errors.**