JOURNAL ENTRY	LO	PERSONALISE YOUR ENTRIES / PORTFOLIO	RESOURCES	WHAT TO ADD TO YOUR JOURNAL
Basic DAW operation	K2: Describe the principles of live sound set-ups and methods of operation for a Digital Audio Workstation .	Session set-up and organisation in ProTools: I) Reflecting on your practice on Pro Tools, research and evaluate editing tools, workflows and strategies, considering the Pros and Cons **Principles of Life sound set-ups.** i. The resolution is always low or high for all the natural sounds ii. It is possible to assign every sound a concrete level iii. The combination values of the sound are 16-bit and 44.1kHz iv. Digitization will lower the resolution recordings	https://resources.avid.com/SupportFiles/PT/Pro_Tools_Reference_Guide_2021.6.pdf Green, C. M. (2021). *The Podcaster's Audio Handbook: A Technical Guide for Creative People*. United States: Apress. How to turn an audio file into a podcast. AuthorsIllumina Digital.(Producer) eVideo2010 [England] : Teachers TV/UK Dept. of Education, 2010. Langford, S. (2014) *Digital audio editing : correcting and enhancing audio in Pro Tools, Logic Pro, Cubase, and Studio One* eBook2014 Burlington, MA : Focal Press https://www.pro-tools-expert.com/home-page/basic-audio-editing-in-pro-tools-start-here	 What Is a DAW? A Guide to Digital Audio Workstations htt

		v. The playlist principle is optimised to Amplitude Pro X **Methods of operation for a Digital Audio Workstation** The DAW works in various ways. The first one is through the external audio interface, which functions mainly through the conversion of analogue audio to form the digital sequence of the data. This data can be processed through a computer. Also, the audio information will appear on the screen of the computer through waves or the notations of music. The individual can hence make any changes by interacting with		

		the information on the screen When setting up the session, there were various things that I encountered during the same process. I learned that there are different editing tools and that the ability for one to learn how to use them will depend on the type of information that they require. Similarly, there are various tools that are simple to use. They also help in producing high-quality sounds. They are tailored to meet the needs of the user. However, the various cons include some of the tools are difficult to understand, especially when the individual does not have enough		

		information pertaining to how they are used.		
Principles of sound technology	s3: Schedule tasks and learning activities efficiently to ensure completion to set deadlines.	I) Research components of a Live Sound system set-up and explain: **how sound vibrations are captured and converted into an electrical signal**; When the sound passes through the voice coil, there is always the creation of an electromagnetic field that is created, and the strength is determined by the flow through the coil. The electromagnetic field now opposes the sound, which pushes the coil in a similar direction. The diaphragm is then moved, which produces the sound through disturbance in the	-Suggested readings: Davis, G. and Jones, R. (2000) The sound reinforcement handbook. 2nd edn. Milwaukee, USA: Hal Leonard Corporation. Rumsey, F. and McCormick, T. (2014) Sound and recording : applications and theory. 7th edn. Burlington MA: Focal Press. Gibson, B. (2011) The ultimate live sound operator's handbook. 2nd edn. Milwaukee, WI: Hal Leonard Books (MusicPro guides). Linkedin Learning - Lynda Brandt, A. (2011) Noise and vibration analysis: signal analysis and experimental procedures. Chichester: Wiley. doi: 10.1002/9780470978160.	 https://www.youtube.com/watch?time_continue=16&v=lhfu Evolution of Sound – Audio Technology Past, Present, and

		air. **how the electrical signal is controlled and increased** The electromagnetic signal is controlled by the coil and increased by the intensity of the moving sound. The coil, when moving in a different direction as opposed to the coil, produces a magnetic field that will generate the sound. **How the electrical signal is converted back into vibrations and propagated.** Through the creation of both a north pole and south pole, the electromagnetic field will convert the appositively charged sound vibrations which		

		will cause coils to collide. Therefore, the sound will be produced and propagated, its intensity depending on the amount of flow that is being experienced within the company. II**) Research on the evolution of audio technology** Audio technology was established in the year the 1870s, which was mainly referred to as the Acoustic era. Most early proponents were David Hughes and Alexander Graham, among others. Different loudspeakers emerged in the years the 1880s when Bell telephone was established by Graham. Oliver Lodge, on the other hand,		

		invented the moving coil loudspeaker. This was the period when many inventions were taking place. However, the electrical era came in and, later, the magnetic era. In the 1990s, the digital era took over, and audio technology was taking the course in the production sector.		

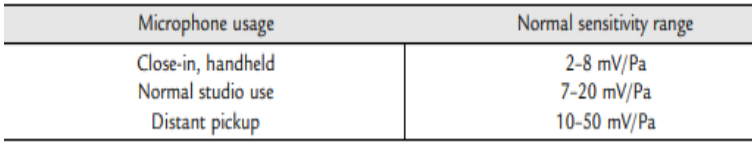
Principles of sound theory and technology	K1: Explain the basic principles of audio technology and sound theory.	Journal Entry: Create a plan for a live event that contains the following information: - Considerations on the effect of air density and temperature on sound - Consideration of how sound propagates in space - Calculation of the venue room modes - Calculation of venue RT60 The effect of air is the first consideration that will be put in mind. To successfully enhance the coverage of the event, first, the direction of the wind will be monitored. This is to ensure that the right direction for the placement of	Davis, G. and Jones, R. (2000) The sound reinforcement handbook. 2nd edn. Milwaukee, USA: Hal Leonard Corporation. Rumsey, F. and McCormick, T. (2014) Sound and recording: applications and theory. 7th edn. Burlington MA: Focal Press. Gibson, B. (2011) The ultimate live sound operator's handbook. 2nd edn. Milwaukee, WI: Hal Leonard Books (MusicPro guides). Everest, F. A. and Pohlmann, K. C. (2009) Master handbook of acoustics. 5Th ed. / edn. New York: McGraw-Hill. Room EQ Wizard Everest, F. A. and Pohlmann, K. C. (2009) Master handbook of acoustics. 5Th ed. / edn. New York: McGraw-Hill. Howard, D. M. and Angus, J. (2009) Acoustics and	RT60 Calculations | Material	125 hz	250 hz	500 hz	1000 hz
Carpet	0.08	0.24	0.57	0.69 | $\mathbf{Sabins}_{\text{carpet @ f}} = \mathbf{S}_{\text{carpet}} * \alpha_{\text{carpet @ f}}$ $\mathbf{Sabins}_{\text{carpet @ 125hz}}$ = (158 ft^2) * (0.08 Sabins / ft^2) = **12.64** Sabins $\mathbf{Sabins}_{\text{carpet @ 250hz}}$ = (158 ft^2) * (0.24 Sabins / ft^2) = **37.92** Sabins $\mathbf{Sabins}_{\text{carpet @ 500hz}}$ = (158 ft^2) * (0.57 Sabins / ft^2) = **90.06** Sabins $\mathbf{Sabins}_{\text{carpet @ 1000hz}}$ = (158 ft^2) * (0.69 Sabins / ft^2) = **109.02** Sabins $\mathbf{Sabins}_{\text{carpet @ 2000hz}}$ = (158 ft^2) * (0.71 Sabins / ft^2) = **112.18** Sabins $\mathbf{Sabins}_{\text{carpet @ 4000hz}}$ = (158 ft^2) * (0.73 Sabins / ft^2) = **115.34** Sabins We can feed those results back into the Sabine Equa $\mathbf{RT60} = \frac{0.049\mathrm{V}}{\mathbf{Sabins}}$ $\mathbf{RT60}_{\text{carpet @ 125hz}}$ = (0.049) * (1589 ft^3) / (**12.64** Sabins) = 6.15 seconds

		the speakers is attained. The microphone will be placed in a cool place, while the intensity of the sound will be kept high. The major reason is to overcome the impacts that temperature and air may have on the transmission of the information. The venue room will therefore be put into consideration and determine the capacity that it will hold over a given time that it will be under consideration.	psychoacoustics. Amsterdam: Focal.	**RT60**$_{\text{carpet @ 250hz}}$ = (0.049) * (1589 ft^3) / (**37.92** Sabins) = 2.05 seconds **RT60**$_{\text{carpet @ 500hz}}$ = (0.049) * (1589 ft^3) / (**90.06** Sabins) = 0.86 seconds **RT60**$_{\text{carpet @ 1000hz}}$ = (0.049) * (1589 ft^3) / (**109.02** Sabins = 0.71 seconds **RT60**$_{\text{carpet @ 2000hz}}$ = (0.049) * (1589 ft^3) / (**112.18** Sabins = 0.69 seconds **RT60**$_{\text{carpet @ 4000hz}}$ = (0.049) * (1589 ft^3) / (**115.34** Sabins = 0.67 seconds
Live Sound set-ups and principles	K2: Describe the principles of live sound set-ups and methods of operation for a Digital Audio Workstation.	Journal Entry: Create a plan for a live event that contains the following information: - Considerations on components of a live sound set-up (K2)	White, P. (2000) Basic live sound. London: Sanctuary. Gibson, B. (2011) The ultimate live sound operator's handbook. 2nd edn. Milwaukee, WI: Hal Leonard Books (MusicPro guides).	The table below shows the RT60 spreadsheet and how co

		The same plan can apply to this particular consideration. However, there are various things that will need to be excluded. Meantime, when creating the sound system, the effect of air is the first consideration that will be put in mind. To successfully enhance the coverage of the event, first, the direction of the wind will be monitored. This is to ensure that the right direction for the placement of the speakers is attained. The microphone will be placed in a cool place, while the intensity of the sound will be kept high. The sound must be adjusted so that they are not too loud. Controlling the		

Room	(feet)		Volume						
Length	13.92		1590						
Width	11.42								
Height	10.00								
		125 hz		250 hz		500 hz		1000 hz	
Desc	Surface	AC	Sabin	AC	Sabin	AC	Sabin	AC	S
carpet	159	0.08	12.72	0.24	38.15	0.57	90.61	0.69	1
Walls+ceiling	666	0.10	66.58	0.08	53.26	0.05	33.29	0.03	
ContraCarpet	56	0.90	50.40	0.54	30.24	0.30	16.80	0.16	
Wideband	282	0.99	279.18	0.99	279.18	0.99	279.18	0.99	2
	Sabins		408.87		400.83		419.88		4
	RT60		**0.19**		**0.19**		**0.19**		

		pitches clearly shows that there will be control and various factors put into consideration.		
Psychoacoustics	K1: Explain the basic principles of audio technology and sound theory.	- Journal Entry: Create a plan for a live event that contains the following information: - risk assessment: ear protection, - setting up delay towers, calculations	Howard, D. M. and Angus, J. (2009) Acoustics and psychoacoustics. Amsterdam: Focal.	Calculations (delay towers), tables

Microphone choices for podcasts	K3: Differentiate the specifications of different types of microphones and loudspeakers	- Principles of microphones and parameters used when selecting microphones in different situations (microphones specifications). Use podcasts as an example. When setting up a live event, various considerations, and there must be a plan that needs to be followed. 1. Assessment of the needs of individuals. Always ensure that the audience is okay with the volume being used. The major reason for such is to ensure that everyone is	Davis, G. and Jones, R. (2000) The sound reinforcement handbook. 2nd edn. Milwaukee, USA: Hal Leonard Corporation. Rumsey, F. and McCormick, T. (2014) Sound and recording : applications and theory. 7th edn. Burlington MA: Focal Press. Gibson, B. (2011) The ultimate live sound operator's handbook. 2nd edn. Milwaukee, WI: Hal Leonard Books (MusicPro guides). Sound On Sound https://www.soundonsound.com/techniques/podcast-like-a-pro Eargle, J. (2004) The microphone book : from mono to stereo to surround - a guide to microphone design and application. 2nd edn. Burlington: Elsevier. Available at: INSERT-MISSING-URL (Accessed: March 11, 2022).	

		comfortable with the volume level of the sound. 2. Setting up the delay towers. Since sound travels using speed, it will be important to have delay towers. Look at the size of the room and determine how well one will propagate the sound so that it can reach the audience clearly. 3. After determining the delay tower, ensure that	https://en-de.neumann.com/ https://www.shure.com/en-GB/products/microphones?lpf[top][types][]=microphones https://www.dpamicrophones.com/mic-university	

		the microphones are well set to accommodate the needs of the live events. Set the microphones in such a way that they will be able to help in sound propagation through the identification of the right pitches. The microphone specifications would be important in this particular consideration. This will depend		

		on the sensitivity of the microphone.		
Loudspeakers/headphones and amplifiers	K3: Differentiate the specifications of different types of microphones and loudspeakers	- Journal Entry: loudspeakers choices for life and studio - Sound systems requirements for different size venues, calculate total amperage, match speakers to amplifiers The choice and plan of the loudspeakers in this particular consideration will vary greatly according to the occasion. For live, choose the loudspeakers that will ensure that there is enough coverage. The choice of the loudspeakers will depend on the number of live audiences. For the studio, the	Davis, G. and Jones, R. (2000) The sound reinforcement handbook. 2nd edn. Milwaukee, USA: Hal Leonard Corporation. Rumsey, F. and McCormick, T. (2014) Sound and recording: applications and theory. 7th edn. Burlington MA: Focal Press. Gibson, B. (2011) The ultimate live sound operator's handbook. 2nd edn. Milwaukee, WI: Hal Leonard Books (MusicPro guides). Toole, F. E. (2008) Sound reproduction: loudspeakers and rooms. Amsterdam: Elsevier. Newell, P. R. and Holland, K. R. (2007) Loudspeakers: for music recording and reproduction. 1st edn. Oxford: Focal.	deciBels NdB=10log10(P2P1)NdB=10log10(P2P1) **Where:** Ndb is the ratio of the two power expressed in deciBels, P2 is the output power level P1 is the input power level dB 10 log P □ □ = □ □ □ □ 150 W dB 10 log 1500 W □ □ = □ □ □ □ dB = 10 log (0.10) = 10 log (10–1) dB = 10 × (–1) = –10 decibel Amperage **Amps = Watts / Volts** Examples: ● 4160 Watts / 208 Volts = 20 Amps ● 3600 Watts / 240 Volts = 15 Amps **Volts = Watts / Amps** Examples: ● 2400 Watts / 20 Amps = 120 Volts ● 2400 Watts / 10 Amps = 240 Volts

		loudspeakers that will be chosen must comply with certain requirements. This may include the size of the studio and the number of people that are present inside the studio. After the choice of the speaker has been identified, it will also be crucial to determine how the sound will be adjusted so that there are minimum disturbances from external interruptions. To ensure that there is the right choice of sound systems, the amperage will be calculated. The sound system depends on the number of the audience in the event and, at the same time, the purpose of use.		

		The sound system in this consideration will depend on how well it will be in a position to satisfy the needs and requirements of the people who would be using it. The amperage calculation will match the speakers to the amplifiers, as shown in the given an example and calculation.		
	S3: Schedule tasks and learning activities efficiently to ensure completion to set deadlines.			