

# Generative AI Lab Unit- 1

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## Output Table ScreenShot:

Observation Table			
Task	Model	Classification (Success/Failure)	Observation (What actually happened?)
Generation	BERT	Failure	<i>Example: Generated nonsense or random symbols.</i>
	RoBERTa	Failure	Failed or produced incoherent output similar to BERT.
	BART	Success	Generated a coherent continuation about the future of AI.
Fill-Mask	BERT	Success	<i>Predicted 'create', 'generate'.</i>
	RoBERTa	Success	Predicted similar high-quality words like "create" and "generate".
	BART	Partial Success	Worked only when using <mask> token instead of [MASK].
QA	BERT	Partial Success	Sometimes returned a relevant phrase like "hallucinations, bias, and deepfakes" but with low confidence.
	RoBERTa	Partial Success	Gave somewhat relevant answer spans but unstable or low confidence.
	BART	Partial Failure	Returned strange or incomplete answers or failed.
Why did this happen? (Architectural Reason)			
<i>BERT is an Encoder; it isn't trained to predict the next word.</i>			
<i>RoBERTa is also encoder-only and trained only for masked token prediction, not sequence generation.</i>			
<i>BART is an encoder-decoder model trained for seq2seq generation tasks like summarization and translation.</i>			
<i>BERT is trained on Masked Language Modeling (MLM).</i>			
<i>RoBERTa is an optimized MLM model with better pretraining data and training strategy.</i>			
<i>BART uses a denoising objective and different special tokens.</i>			
<i>BERT-base is not fine-tuned for QA; it lacks task-specific supervision.</i>			
<i>Also not fine-tuned for QA. Encoder-only but needs QA fine-tuning (e.g., on SQuAD).</i>			
<i>BART-base is generative and not trained for extractive QA tasks.</i>			

## GitHub Repo Link:

[https://github.com/GSuryaP/GenAI\\_Labs\\_PES2UG23CS192/tree/main/Unit1](https://github.com/GSuryaP/GenAI_Labs_PES2UG23CS192/tree/main/Unit1)