QBee Academy Artificial Intelligence Course Syllabus

Module 1: Introduction to Artificial Intelligence

1. **What is AI?**
   - Definition and examples of AI in everyday life
   - AI vs. Human Intelligence
2. **Types of AI**
   - Narrow AI
   - General AI
3. **History of AI**
   - Brief history and milestones in AI development

Project for Module 1:

- **Create a Presentation on AI**
  - Students create a simple presentation or poster about AI, including examples of AI they encounter in daily life (e.g., Siri, Google Assistant).

Module 2: Understanding Machine Learning

4. **Introduction to Machine Learning**
   - What is Machine Learning?
   - Types of Machine Learning: Supervised, Unsupervised, and Reinforcement Learning
5. **How Machines Learn**
   - Data collection
   - Training a model
   - Evaluating a model

Project for Module 2:

- **Simple Math Game**
  - Students create a basic math game using Python, where the computer generates random math problems for the user to solve.

Module 3: AI in Daily Life

6. **AI Applications**
   o AI in games (e.g., chess, tic-tac-toe)
   o AI in healthcare
   o AI in transportation (self-driving cars)
   o AI in personal assistants (Siri, Alexa)
7. **Ethical Considerations**
   o Privacy concerns
   o Job displacement
   o AI bias

Project for Module 3:

- **AI Use Case Study**
  o Students choose an AI application (e.g., self-driving cars) and create a simple report or presentation discussing its benefits and potential drawbacks.

Module 4: Hands-On with AI Tools

8. **Introduction to AI Tools**
   o Using simple AI tools and platforms designed for kids (e.g., Scratch with AI extensions, Teachable Machine)
9. **Creating AI Models**
   o Basic steps to create an AI model using available tools

Project for Module 4:

- **Rock Paper Scissors**
  o Students create a Rock, Paper, Scissors game using a simple AI model to predict the user's moves.

Module 5: Fun AI Projects

10. **Chatbots**
    o What are chatbots?
    o Creating a basic chatbot using a simple chatbot platform
11. **AI in Art**
    o AI-generated art and music

o   Creating simple AI art using online tools

Project for Module 5:

- **Create a Chatbot**
    o   Students use a platform like Scratch or a simple online chatbot tool to create a basic chatbot that can respond to simple questions.

Module 6: Future of AI

12. **The Future of AI**
    o   Upcoming trends in AI
    o   How AI might shape the future
13. **Career Paths in AI**
    o   Different career options in AI and related fields

Project for Module 6:

- **AI in the Future**
    o   Students imagine and write about a future technology powered by AI. They can draw or write a short story about how this technology will change people's lives.