Bayes Esports DevOps Take-home Assignment

Answers don't need to be complete as that would require too much time but they're expected to show a certain level of knowledge and attention to detail. What's important are the design choices and critical decisions. Unless specified otherwise, you can provide code or describe your decisions and important steps etc. Or you can do a mix of both.

Please provide a ZIP archive that contains your answers. You should use relevant file extensions such as: **.tf**, **.py**, **.sh, .yaml** etc. For additional files, please use either **.md** or **.txt**. Please do not use PDF or Microsoft Office document formats such as DOCX.

Question 1: Using Terraform (version >1.2) and the terraform module terraform-aws-vpc how would you create a production ready VPC? What are the design choices you make? Please provide code in the form of

```
module "vpc" {
    source = "terraform-aws-modules/vpc/aws"

    # TODO
}
```

and explain your decisions in the comments.

Question 2: How would you create a kubernetes cluster on this VPC? What are the design choices you make? You can use any tool you want (except EKS, Rancher, Supergiant). Explain in detail.

Question 3: How would you respond and resolve an incident where you have utilization imbalance in your cluster where one node is critically overloaded?

Question 4: It's time to show your coding skill. Build your own "**process supervisor daemon**". Don't use or rely on any existing tools (such as upstart, supervisord etc). This tool should check that the process is running at all times and start it in case it is down. It should take as parameters:

(a) Seconds to wait between attempts to restart service.
(b) Number of attempts before giving up.
(c) The name of the process to supervise.
(d) Check interval in seconds.
(e) Generate logs in case of events.
