**a) Data Set Description**

Explain in detail the dataset: attributes, input variables, output variable (only

one), data types, missing data, etc.

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| **Attribute** | **Description** |
| class (output) | It describes either person have diabetes or not. |
| Polyuria | Frequent urination among the diabetic and non-diabetic person |
| Polydipsia | An increase in thirst |
| sudden weight loss | Diabetic patients can lose weight abnormally. |
| weakness | Weakness occurs when the cells do not get enough glucose. The medicines for diabetes help sugar to reach the cells for energy that it may not lead to harmful levels in blood. The side effect of diabetic medicines is low blood sugar, or hypoglycemia. |
| Polyphagia | A rise in appetite |
| Genital thrush | Diabetic patients usually suffer with yeast infections problem due to increase in candida (fungal growth). It leads to high sugar levels in a person’s saliva, sweat and urine which results in the yeast growth in a person’s body and can end up with thrush. |
| Itching | Yeast infection to a diabetic person can cause itching. |
| Irritability | A person suffering from diabetes can have mood swings, blood-sugar, and glycemic. Due to glycemic, a person can suffer with poor mental health condition, such as anxiety and worry. This is due to glucose level in brain which controls brain’s working.  Glycemic index (GI) depends on the food that a person takes. Foods having carbohydrates have a GI. A diabetic person who eats foods having no carbohydrates can also suffer problems due to affect in blood sugar. |
| Delayed healing | In diabetic patients, wounds do not heal well or healing occurs slowly because of the stopping of natural phenomenon of the body to produce or use insulin. |
| Partial paresis | Partial paresis also known as partial or mild paralysis. This is the process of weakening of a muscle or group of muscles. It occurs due to damage of nerves in body. |
| Muscle stiffness | Diabetes patients can have leg pain due to the process of diabetic neuropathy (a process of nerves damage around a person’s muscles). As muscles leads to nerves damage, a person can become unable to walk. |
| Alopecia | Hairs from the body are removed in diabetic patients. |
| Obesity | Diabetic patients can gain weight abnormally. |