This file contains a description of the codes related to GSIS group inclusion probability methods provided in the current folder.

**Short Description of the files in the current folder**

1. **G**SIS**.R:** This file contains the function GSISd, which calculates the GSIS group inclusion probabilities for a given data and choice of d. The inputs, outputs, and usage of the function GSISd are given in GSIS.R.
2. **input.RData** This is a RData file required for the Application.R file, and contains an example data set. In particular, it contains the following objects:
   1. **X**: The design matrix in nXp format, where n is the no. of observations, and p is the number of covariates.
   2. **y**: The n vector of responses
   3. **true\_group\_structure**: A p-length vector indicating the groups indices as numbers. For example, for p = 6, if X1, X3, X5 belong to group 1, X2, X6 belong to group 2, and X4 belong to group 3, then the true\_group\_structure would be c(1, 2, 1, 3, 1, 2).
3. **Application.R:** This file demonstrates how GSIS group inclusion probabilities can be calculated for a given data set. In order to apply GSIS on a given data set, one has to create an input.RData file containing the 3 objects X, y and true\_group\_structure (as defined above), keep the file in the current folder, and follow the steps given in Application.R.