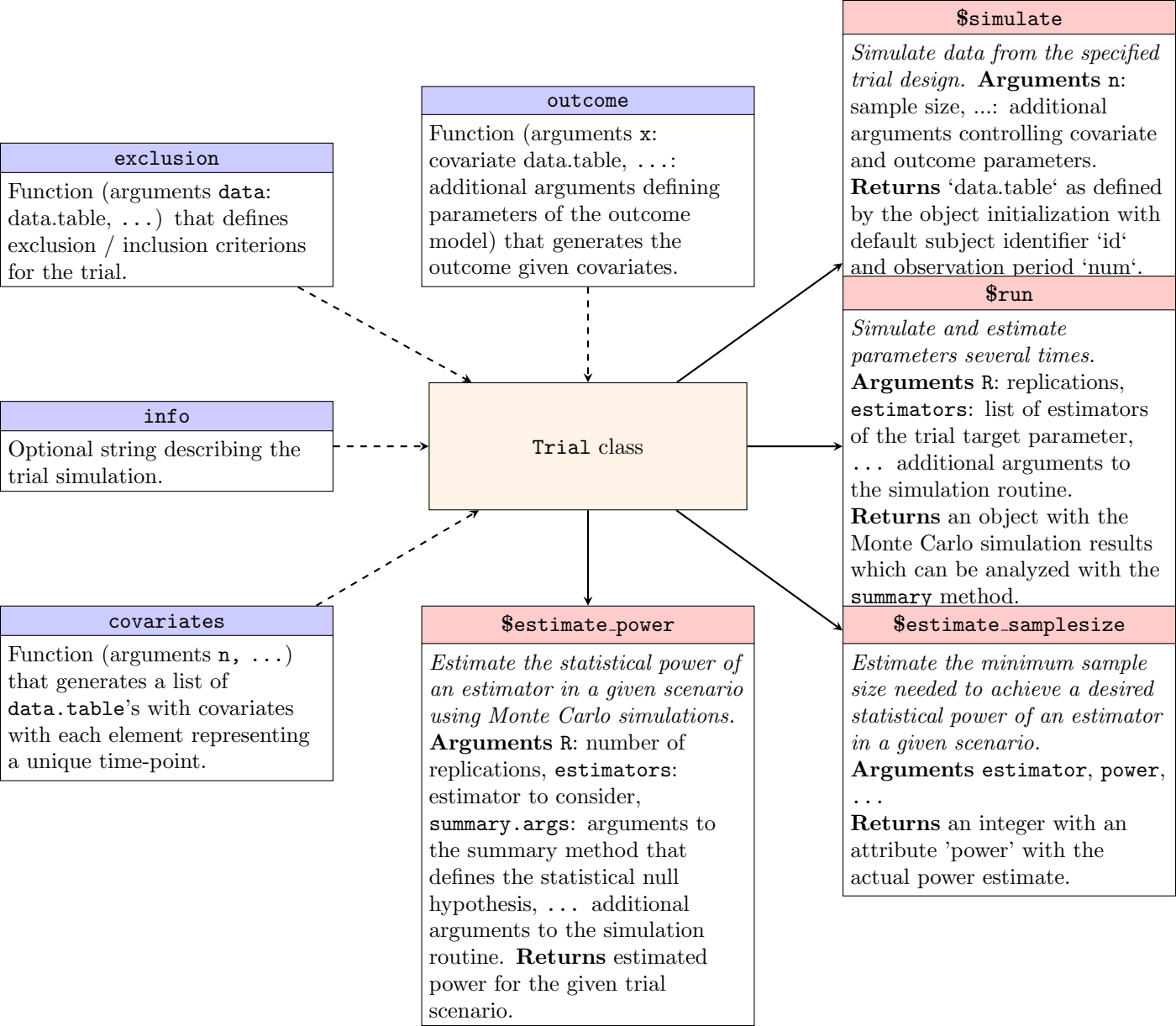
exclusion
Function (arguments data: data.table, ...) that defines exclusion / inclusion criterions for the trial.
outcome
Function (arguments x: covariate data.table, ...: additional arguments defining parameters of the outcome model) that generates the outcome given covariates.
$simulate
Simulate data from the specified trial design. Arguments n: sample size, ...: additional arguments controlling covariate and outcome parameters. Returns 'data.table' as defined by the object initialization with default subject identifier 'id' and observation period 'num'.
info
Optional string describing the trial simulation.
Trial class
$run
Simulate and estimate parameters several times. Arguments R: replications, estimators: list of estimators of the trial target parameter, ... additional arguments to the simulation routine. Returns an object with the Monte Carlo simulation results which can be analyzed with the summary method.
covariates
Function (arguments n, ...) that generates a list of data.table's with covariates with each element representing a unique time-point.
$estimate_power
Estimate the statistical power of an estimator in a given scenario using Monte Carlo simulations. Arguments R: number of replications, estimators: estimator to consider, summary.args: arguments to the summary method that defines the statistical null hypothesis, ... additional arguments to the simulation routine. Returns estimated power for the given trial scenario.
$estimate_samplesize
Estimate the minimum sample size needed to achieve a desired statistical power of an estimator in a given scenario. Arguments estimator, power, ... Returns an integer with an attribute 'power' with the actual power estimate.