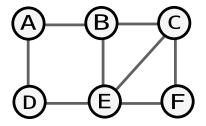
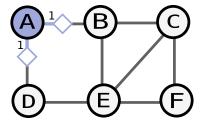
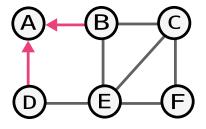
# Synchronous single initiator spanning tree algorithm using flooding

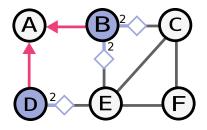
Siddharth Bhat, Anurag Chaturvedi, Hitesh Kaushik

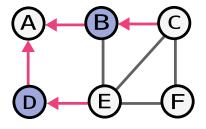
March 13, 2020

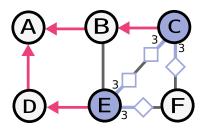


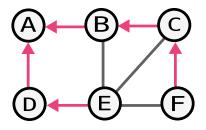












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- ► Algorithm is synchronous.

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 if self.id == ROOT_ID:
   self.visited = True; self.depth = 0;
 for n in self.neighbours: n.send(self.id)
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  for round in range(1, DIAMETER+1):
      if self.visited: # if visited, skip
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  self.visited = True; self.depth = 0;
  for n in self.neighbours: n.send(self.id)
for round in range(1, DIAMETER+1):
  if self.visited: # if visited, skip
    if self.queries: # if we have a query
      # randomly choose from queries
      parent = random.choice(self.query)
      self.visited = True
      self.depth = round
```

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- Algorithm is synchronous.

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  if self.visited: # if visited, skip
    if self.queries: # if we have a query
      # randomly choose from queries
      parent = random.choice(self.query)
      self.visited = True
      self.depth = round
      # synchronous
      for n in self.neighbours: n.send(self.id)
  self.queries = [];
                              4D > 4B > 4B > B 990
```