TASK 1: BASEBALL SCHEDULING

Using graph colouring, find a schedule for the following games:

Washington Nationals VS Houston Astros	Mets VS Dodgers	Houston Astros VS Giants	Toronto Blue Jays VS Miami	Houston Astros VS Dodgers	Washington Nationals VS Toronto Blue Jays	Giants VS Dodgers	Pirates VS Toronto Blue Jays

Washington Nationals VS Pirates	Pirates VS Houston Astros	Pirates VS Mets	Toronto Blue Jays VS Giants	Mets VS Miami	Giants VS Miami	Washington Nationals VS Mets	Houston Astros VS Mets

TASK 2: SPORTS CLUB SCHEDULING

Ysgol Pontypandy has ten sports clubs they would like to schedule. The ten teams are:

- Rugby league boys (RLB)
- Rugby league girls (RLG)
- Rugby union boys (RUB)
- Rugby union girls (RUG)
- Football boys (FB)
- Football girls (FG)
- Gymnastics boys (GB)
- Gymnastics girls (GG)
- Yoga (Y)
- Netball (N)

Clubs can run lunchtimes or after school, but they would like to minimise the number of slots they use by scheduling some clubs at the same time as others.

Some teams share locations or coaches, and so cannot be scheduled at the same time:

- All rugby teams need the rugby pitch,
- All football teams need the football pitch,
- Yoga and all gymnastics teams use the same hall,
- The girls' football team and the boys' rugby teams have the same coach,
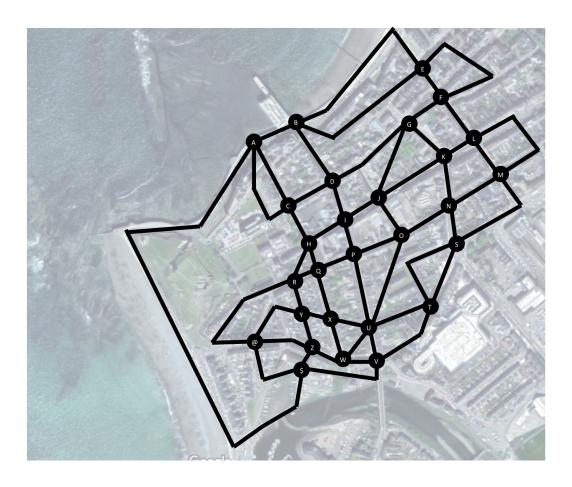- The boys' gymnastics team and the girls' rugby league team have the same coach.

Furthermore some teams share players, so cannot be scheduled at the same time:

- RLG, FG, and GG all share players,
- RUG, RLG and FG all share players,
- RUB and FB share players,
- FB and Y share players,
- RUG and N share players,
- GG and N share players.

Using graph colouring, find a schedule for the sports teams.

BONUS TASK: SNOWPLOUGH ROUTING

Find a route for the snowplough through so it does not travel through any roads it has already ploughed:

Solution available at: http://www.geraintianpalmer.org.uk/outreach/