ГУАП

КАФЕДРА № 43

ОТЧЕТ   
ЗАЩИЩЕН С ОЦЕНКОЙ

ПРЕПОДАВАТЕЛЬ

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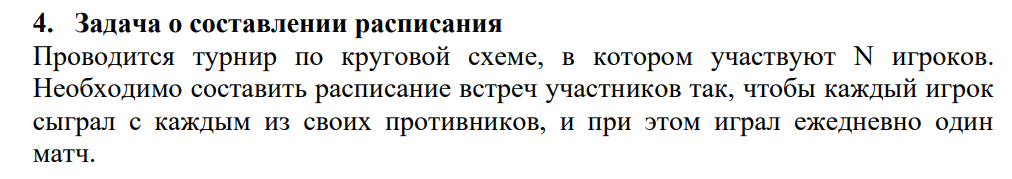
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| ОТЧЕТ О ЛАБОРАТОРНОЙ РАБОТЕ №7 |
| Недетерминированное программирование |
| по курсу: ФУНКЦИОНАЛЬНОЕ И ЛОГИЧЕСКОЕ ПРОГРАММИРОВАНИЕ |
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РАБОТУ ВЫПОЛНИЛ

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| СТУДЕНТ ГР. № | 4136 |  | 09.06.2023 |  | Н. С. Бобрович |
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Санкт-Петербург 2023

**Задание:   
  
На языке Prolog.**

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**Ход работы.**

**Листинг:**

get\_set\_games(N, Result) :-

get\_set\_games\_helper(N, 1, [], Result).

get\_set\_games\_helper(1, M, Acc, Result) :-

append(Acc, [[1, M]], Result).

get\_set\_games\_helper(N, M, Acc, Result) :-

N > 1,

append(Acc, [[N, M]], Acc1),

M1 is M + 1,

N1 is N - 1,

get\_set\_games\_helper(N1, M1, Acc1, Result).

get\_set\_players(N, Result) :-

numlist(1, N, Result).

delete\_list1\_from\_list2([], List2, List2).

delete\_list1\_from\_list2([X | Rest], List2, Result) :-

delete\_list1\_from\_list2(Rest, List2, Result1),

select(X, Result1, Result).

get\_day(\_, [], []).

get\_day(SetPlayers, [Game | Rest], [Game | Result]) :-

subset(Game, SetPlayers),

delete\_list1\_from\_list2(Game, SetPlayers, NewSetPlayers),

get\_day(NewSetPlayers, Rest, Result).

get\_day(SetPlayers, [\_ | Rest], Result) :-

get\_day(SetPlayers, Rest, Result).

get\_valid\_day(SetPlayers, SetGames, Day) :-

get\_day(SetPlayers, SetGames, Day),

length(Day, HalfLength),

length(SetPlayers, SetPlayersLength),

HalfLength is SetPlayersLength // 2.

get\_schedule(SetPlayers, SetGames, Result) :-

get\_schedule\_helper(SetPlayers, SetGames, [], Result).

get\_schedule\_helper(\_, [], Acc, Result) :-

reverse(Acc, Result).

get\_schedule\_helper(SetPlayers, SetGames, Acc, Result) :-

get\_valid\_day(SetPlayers, SetGames, Day),

delete\_list1\_from\_list2(Day, SetGames, NewSetGames),

get\_schedule\_helper(SetPlayers, NewSetGames, [Day | Acc], Result).

start(N, Schedule) :-

N > 0,

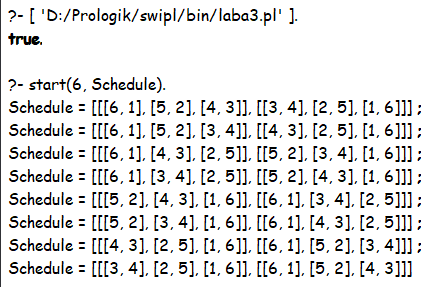
N mod 2 =:= 0,

get\_set\_players(N, SetPlayers),

get\_set\_games(N, SetGames),

get\_schedule(SetPlayers, SetGames, Schedule).

**Output:**

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**Вывод:** Выполнил задание на языке Prolog.