



BCI1143 PROBLEM SOLVING

GROUP ASSIGNMENT

SEMESTER I 2022/2023

TOPIC	INVESTIGATE THE INTAKE OF UNDERGRADUATE	
GROUP	GROUP 2	
GROUP MEMBERS		
STUDENT ID	SECTION	NAME
SD22059	02G	LOW ANN GIE
SD22061	02G	ANG MEI YING
SD22029	01G	ALENA NG PEI YEEN
SD22042	02G	MUHAMMAD AIZUDDIN BIN AZMI

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No.	Date and Time	Location	Activities	Signature
1.	7/12/2022 (9:00 a.m. - 10:00 a.m.)	Google Meet	1. Formed a group of 4 members. 2. Discuss about the topic that suitable to the given task. 3. Choose a topic named "Intake Undergraduate Student" 4. Discuss case study and write analysis about the topic.	 
2.	16/12/2022 (8.30 p.m. - 10.00 p.m)	Google Meet	1. Complete case study and discuss the elements, categories and conditions in Problem Analysis Chart. 2. Discuss Problem Analysis Chart (PAC). 3. Discuss Interactivity Chart (IC). 4. Discuss Input Processing Output (IPO). 5. Complete Problem Analysis Chart (PAC). 6. Complete Interactivity Chart (IC).	 
3.	23/12/2022 (10:30 a.m. – 5:00 p.m.)	Amphitheater	1. Discuss algorithm without module. 2. Complete Input Processing Output (IPO). 3. Complete algorithm without module. 4. Discuss algorithm with module. 5. Write algorithm without module. 6. Draw flowchart without module.	 
4.	31/12/2022 (10:30 a.m. – 5:00 p.m.)	Amphitheater	1. Complete algorithm without module. 2. Complete flowchart without module. 3. Discuss desk checking. 4. Discuss coupling diagram. 5. Discuss data dictionary.	 
5.	7/12/2022 (10:30 a.m. – 5:00 p.m.)	Amphitheater	1. Complete desk checking. 2. Complete the coupling diagram. 3. Complete the data dictionary. 4. Write algorithm with module. 5. Draw flowchart with module by using Flogorithm. 6. Run the Flogorithm. 7. Discuss programming (input/output).	 
6.	13/1/2023 (10:30 a.m. - 5:00 p.m.)	Amphitheater and Library UMP	1. Complete programming by using C programming language.	

			2. Design Interface Prototype including input and output. 3. Carry out checking in all of the tasks.	 arvind  arvind
7.	17/1/2023 (12:00 p.m. - 2:00 p.m.)	Computer Lab	1. Complete presentation	 alena  arvind
8.	20/1/2023 (7:00 p.m. - 11:00 p.m.)	Google Meet	1. Redo the algorithm with module 2. Redo coupling diagram 3. Redo data dictionary 4. Redo flowchart with module	 alena  arvind
9.	22/12/2023 (8:00 p.m. – 10:00 p.m.)	Google Meet	1. Recheck all the parts in this assignment. 2. Combine all the parts into a pdf document and submit in UDAS.	 alena  arvind

Case Study

Choosing a higher education institution is one of the most important things in our career development journey. After receiving their pre-university cgpa results, most students have the same questions: "Which university can they apply to based on their cgpa, and what factors may affect their admission to a local university?" As a part of project assigned by Miss Aina in the problem solving in data analytics course. We are completing this case study in an attempt to investigate the intake of undergraduate students in University Malaysia Pahang.

The objective of this study is to gain valuable information about the demographics and qualifications of the student body, as well as the effectiveness of the admissions process. This information can be used to improve the diversity and representation of the student body, ensure that admitted students are prepared for the academic rigors of the program, and identify areas for improvement in the admissions process. Additionally, investigating the intake of undergraduate students can provide insight into the broader trends in higher education, such as changes in the qualifications of applicants or shifts in the demographics of students pursuing higher education. Besides that, Student personal information and students' performance in academic and co-curriculum are collected to identify what are the entry requirement for undergraduate students in UMP.

By using a suitable program, we aimed to collect the student name, gender, age, race, phone number, Pre-U graduate category, Pre-U stream, muet result, SPM result, Pre-University cgpa and koko marks. After collecting the data, the program is designed to calculate the average age, percentage of genders, percentage of races, percentage of pre-university graduate categories, percentage pre-University cgpa, highest percentage of pre-University cgpa, merit marks, average Muet result and SPM result. For SPM result, students only need to provide number of getting A in SPM while the pre-University cgpa is category by grades as shown in table below.

Grades	Pre-U cgpa
A	$3.0 \leqslant \text{cgpa} \leqslant 4.0$
B	$2.0 \leqslant \text{cgpa} < 3.0$
C	$1.0 \leqslant \text{cgpa} < 2.0$
D	$\text{cgpa} < 1.0$

Table 1 : Grades and Range of Pre-U cgpa

These pieces of data must be input into the computer in a user friendly way. In other words, the computer must prompt the user to enter each piece of data as shown below. (Color indicates typical data).

Name? Janice
Gender? Female
Age? 20
Race? Chinese
Phone Number? 01134918761
Pre-University Graduate Category? STPM
Pre-University Stream? Sastera
Pre-University cgpa Grade? A
Muet Band? 4.0
SPM Result? 9
Pre-University cgpa? 3.6
Koko Marks? 8.2

The output format is shown below.

INTAKE UNDERGRADUATE STUDENTS
Name XX
Gender XX
Age XX
Race XX
Phone Number XX
Pre-University Graduate Category XX
Pre-University Stream XX
Pre-University cgpa Grade XX
Muet Band XX
SPM Result XX
Pre-University cgpa XX
Average age XX
Percentage of Male XX

Percentage of Female	XX
Percentage of Malay Students	XX
Percentage of Chinese Students	XX
Percentage of Indian Students	XX
Percentage of Others Race Students	XX
Percentage of STPM Students	XX
Percentage of Matriks Students	XX
Percentage of Diploma Students	XX
Percentage of Foundation Students	XX
Percentage of A-Level Students	XX
Total Pre-University Sains Stream	XX
Total Pre-University Sastera Stream	XX
Percentage D	XX
Percentage C	XX
Percentage B	XX
Percentage A	XX
Koko Marks	XX
Merit Marks	XX
Average Merit	XX
Average Muet Band	XX
Average SPM Result	XX

Problem Analysis Chart (PAC)

Given Data	Required Result
studentName	studentName
gender	gender
age	age
race	race
phoneNum	phoneNum
PreUgraduateCategory	PreUgraduateCategory
PreUstream	PreUstream
PreUcgpaGrade	MuetBand
MuetBand	SPMresult
SPMresult	PreUcgpa
PreUcgpa	averageAge
kokoMarks	PercentageOfMale
	PercentageOfFemale
	PercentageOfMalayStudents
	PercentageOfChineseStudents
	PercentageOfIndianStudents
	PercentageOfOthersStudents
	PercentageSTPMStudents
	PercentageMatriksStudents
	PercentageFoundationStudents
	PercentageDiplomaStudents
	PercentageAlevelStudents
	PreUsainsStream
	PreUsasteraStream
	PercentageD
	PercentageC
	PercentageB
	PercentageA
	kokoMarks
	meritMarks
	averageMerit

	averageMuetBand averageSPMresult
Processing Required	Solution Alternative
Counter = 0 totalAge = 0 male = 0 female = 0 Malay= 0 Chinese = 0 Indian = 0 Others = 0 STPM = 0 Matriks = 0 Foundation=0 Diploma = 0 Alevel = 0 Sains = 0 Sastera = 0 D = 0 C = 0 B = 0 A = 0 Do Counter = Counter + 1 totalAge = totalAge + Age Calculate averageAge = (totalAge/Counter) If gender == “male” then male = male + 1 Calculate PercentageOfMale =(male/Counter)*100 Else female = female + 1	Define all the given data as constants *Define all the given data as input values

```

Calculate PercentageOfFemale =
(female/Counter)*100

End if

If race == "Malay" then
    Malay = Malay +1
    Calculate PercentageOfMalayStudents =
(Malay/Counter)*100

Else if race == "Chinese" then
    Chinese = Chinese +1
    Calculate PercentageOfChineseStudents
= (Chinese/Counter)*100

Else if race == "Indian" then
    Indian = Indian +1
    Calculate PercentageOfIndianStudents =
(Indian/Counter)*100

Else
    Others = Others + 1
    Calculate PercentageOfOthersStudents
= (Others/Counter)*100

End if

If PreUgraduateCategory == "STPM" then
    STPM = STPM + 1
    Calculate PercentageSTPMStudents =
(STPM/Counter)*100

Else if PreUgraduateCategory == "Matriks"
then
    Matriks = Matriks + 1
    Calculate PercentageMatriksStudents =
(Matriks/Counter)*100

Else if PreUgraduateCategory ==
"Foundation" then
    Foundation = Foundation + 1

```

```

Calculate
PercentageFoundationStudents =
(Foundation/Counter)*100
Else if PreUgraduateCategory == "Diploma"
then
    Diploma = Diploma + 1
    Calculate PercentageDiplomaStudents =
(Diploma/Counter)*100
Else
    Alevel = Alevel + 1
    Calculate PercentageAlevelStudents =
(Alevel/Counter)*100
End if
If PreUstream == "Sains" then
    Sains = Sains + 1
    Calculate PercentagePreUsainsStream =
(Sains/Counter)*100
Else
    Sastera = Sastera + 1
    Calculate PercentagePreUsasteraStream
= (Sastera/Counter)*100
End if
If PreUcgpaGrade == "D" then
    D = D + 1
    Calculate PercentageD =
(D/Counter)*100
Else if PreUcgpaGrade == "C" then
    C = C + 1
    Calculate PercentageC =
(C/Counter)*100
Else if PreUcgpaGrade == "B" then
    B = B + 1

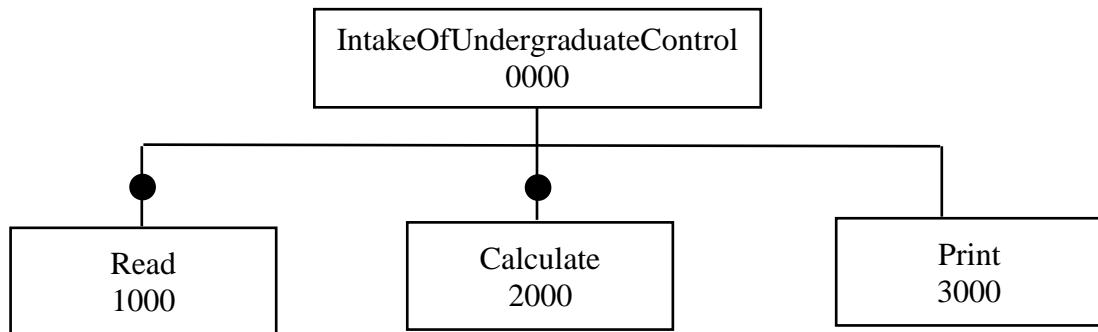
```

```

Calculate PercentageB =
(B/Counter)*100
Else
    A = A + 1
    Calculate PercentageA =
(A/Counter)*100
End if
If PercentageA >= PercentageB &
PercentageA >= PercentageC &
PercentageA >= PercentageD then
    Print HighestPercentagePreUcgpa = A
Else if PercentageB >= PercentageA &
PercentageB >= PercentageC &
PercentageB >= PercentageD then
    Print HighestPercentagePreUcgpa = B
Else if PercentageC >= PercentageA &
PercentageC >= PercentageB &
PercentageC >= PercentageD then
    Print HighestPercentagePreUcgpa = C
Else
    Print HighestPercentagePreUcgpa = D
End if
Calculate meritMarks = (PreUcgpa/4.0)*90 +
kokoMarks
Calculate averagemerit =
meritMarks/Counter
Calculate averageMuetBand =
MuetBand/Counter
Calculate averageSPMresult =
SPMresult/Counter
Enter exit
While exit < > 1

```

Interactivity Chart (IC)



Input Processing Output Chart (IPO)

Input	Processing	Module Reference	Output
studentName	1 IntakeUndergraduateStudentControl ()		
gender	2 Read studentName	Read	
age	3 Read gender	Read	
race	4 Read age	Read	
phoneNum	5 Read race	Read	
PreUgraduateCategory	6 Read phoneNum	Read	
PreUstream	7 Read PreUgraduateCategory	Read	
PreUcgpaGrade	8 Read PreUstream	Read	
MuetBand	9 Read PreUcgpaGrade	Read	
SPMresult	10 Read MuetBand	Read	
PreUcgpa	11 Read SPMresult	Read	
kokoMarks	12 Read PreUcgpa	Read	
	13 Read kokoMarks	Read	
	14 Counter = 0	Calculate	
	15 totalAge = 0	Calculate	
	16 male = 0	Calculate	
	17 female = 0	Calculate	
	18 Malay= 0	Calculate	
	19 Chinese = 0	Calculate	
	20 Indian = 0	Calculate	
	21 Others = 0	Calculate	
	22 STPM = 0	Calculate	
	23 Matriks = 0	Calculate	
	24 Foundation = 0	Calculate	
	25 Diploma = 0	Calculate	
	26 Alevel = 0	Calculate	
	27 Sains = 0	Calculate	
	28 Sastera = 0	Calculate	
	29 D = 0	Calculate	
	30 C = 0	Calculate	
	31 B = 0	Calculate	
	32 A = 0	Calculate	
	33 Do	Calculate	
	34 Counter = Counter + 1	Calculate	
	35 totalAge = totalAge + Age	Calculate	
	36 Calculate averageAge = (totalAge/Counter)	Calculate	
	37 If gender == "male" then	Calculate	
	38 male = male + 1	Calculate	
	39 Calculate PercentageOfMale = (male/Counter)*100	Calculate	
	40 Else	Calculate	
	41 female = female + 1	Calculate	
	42 Calculate PercentageOfFemale = (female/Counter)*100	Calculate	
	43 End if	Calculate	
	44 If race == "Malay" then	Calculate	
	45 Malay = Malay +1	Calculate	
	46 Calculate PercentageOfMalayStudents = (Malay/Counter)*100	Calculate	
	47 Else if race == "Chinese" then	Calculate	
	48 Chinese = Chinese +1	Calculate	
	49 Calculate PercentageOfChineseStudents = (Chinese/Counter)*100	Calculate	
	50 Else if race == "Indian" then	Calculate	

Input	Processing	Module Reference	Output
51	Indian = Indian +1	Calculate	
52	Calculate PercentageOfIndianStudents = (Indian/Counter)*100	Calculate	
53 Else		Calculate	
54	Others = Others + 1	Calculate	
55	Calculate PercentageOfOthersStudents = (Others/Counter)*100	Calculate	
56 End if		Calculate	
57 If PreUgraduateCategory == "STPM" then		Calculate	
58	STPM = STPM + 1	Calculate	
59	Calculate PercentageSTPMstudents = (STPM/Counter)*100	Calculate	
60 Else if PreUgraduateCategory == "Matriks" then		Calculate	
61	Matriks = Matriks + 1	Calculate	
62	Calculate PercentageMatriksStudents = (Matriks/Counter)*100	Calculate	
63 Else if PreUgraduateCategory == "Foundation" then		Calculate	
64	Foundation = Foundation + 1	Calculate	
65	Calculate PercentageFoundationStudents = (Foundation/Counter)*100	Calculate	
66 Else if PreUgraduateCategory == "Diploma" then		Calculate	
67	Diploma = Diploma + 1	Calculate	
68	Calculate PercentageDiplomaStudents = (Diploma/Counter)*100	Calculate	
69 Else		Calculate	
70	Alevel = Alevel + 1	Calculate	
71	Calculate PercentageAlevelStudents = (Alevel/Counter)*100	Calculate	
72 End if		Calculate	
73 If PreUstream == "Sains" then		Calculate	
74	Sains = Sains + 1	Calculate	
75	Calculate PercentagePreUsainsStream = (Sains/Counter)*100	Calculate	
76 Else		Calculate	
77	Sastera = Sastera + 1	Calculate	
78	Calculate PercentagePreUsasteraStream = (Sastera/Counter)*100	Calculate	
79 End if		Calculate	
80 If PreUcgpaGrade == "D" then		Calculate	
81	D = D + 1	Calculate	
82	Calculate PercentageD = (D/Counter)*100	Calculate	
83 Else if PreUcgpaGrade == "C" then		Calculate	
84	C = C + 1	Calculate	
85	Calculate PercentageC = (C/Counter)*100	Calculate	
86 Else if PreUcgpaGrade == "B" then		Calculate	
87	B = B + 1	Calculate	
88	Calculate PercentageB = (B/Counter)*100	Calculate	
89 Else		Calculate	
90	A = A + 1	Calculate	
91	Calculate PercentageA = (A/Counter)*100	Calculate	
92 End if		Calculate	
	If PercentageA >= PercentageB 93 & PercentageA >= PercentageC & PercentageA >= PercentageD then	Calculate	
94	Print HighestPercentagePreUcgpa = A	Print	HighestPercentagePreUcgpa = A
	Else if PercentageB >= PercentageA 95 & PercentageB >= PercentageC & PercentageB >= PercentageD then	Calculate	
96	Print HighestPercentagePreUcgpa = B	Print	HighestPercentagePreUcgpa = B
	Else if PercentageC >= PercentageA 97 & PercentageC >= PercentageB & PercentageC >= PercentageD then	Calculate	
98	Print HighestPercentagePreUcgpa = C	Print	HighestPercentagePreUcgpa = C
99 Else		Calculate	
100	Print HighestPercentagePreUcgpa = D	Print	HighestPercentagePreUcgpa = D

Input	Processing	Module Reference	Output
101 End if		Calculate	
102 Calculate meritMarks = (PreUcgpa/4.0)*90 + kokoMarks		Calculate	
103 Calculate averageMerit = meritMarks/Counter		Calculate	
104 Calculate averageMuetBand = MuetBand/Counter		Calculate	
105 Calculate averageSPMResult = SPMresult/Counter		Calculate	
106 Enter exit		Read	
107 While exit < > 1		Calculate	
108 Print studentName		Print	studentName
109 Print gender		Print	gender
110 Print age		Print	age
111 Print race		Print	race
112 Print phoneNum		Print	phoneNum
113 Print PreUgraduateCategory		Print	PreUgraduateCategory
114 Print PreUstream		Print	PreUstream
115 Print PreUcgpaGrade		Print	PreUcgpaGrade
116 Print MuetBand		Print	MuetBand
117 Print SPMresult		Print	SPMresult
118 Print PreUcgpa		Print	PreUcgpa
119 Print averageAge		Print	averageAge
120 Print PercentageOfMale		Print	PercentageOfMale
121 Print PercentageOfFemale		Print	PercentageOfFemale
122 Print PercentageOfMalayStudents		Print	PercentageOfMalayStudents
123 Print PercentageOfChineseStudents		Print	PercentageOfChineseStudents
124 Print PercentageOfIndianStudents		Print	PercentageOfIndianStudents
125 Print PercentageOfOthersStudents		Print	PercentageOfOthersStudents
126 Print PercentageSTPMstudents		Print	PercentageSTPMstudents
127 Print PercentageMatriksStudents		Print	PercentageMatriksStudents
128 Print PercentageFoundationStudents		Print	PercentageFoundationStudents
129 Print PercentageDiplomaStudents		Print	PercentageDiplomaStudents
130 Print PercentageAlevelStudents		Print	PercentageAlevelStudents
131 Print PercentagePreUsainsStream		Print	PercentagePreUsainsStream
132 Print PercentagePreUsasteraStream		Print	PercentagePreUsasteraStream
133 Print PercentageD		Print	PercentageD
134 Print PercentageC		Print	PercentageC
135 Print PercentageB		Print	PercentageB
136 Print PercentageA		Print	PercentageA
137 Print kokoMarks		Print	kokoMarks
138 Print meritMarks		Print	meritMarks
139 Print averageMerit		Print	averageMerit
140 Print averageMuetBand		Print	averageMuetBand
141 Print averageSPMresult		Print	averageSPMresult
142 End	IntakeUndergraduateStudentControl ()		

Algorithm without module

```
1 IntakeUndergraduateStudentControl ()  
2 Read studentName  
3 Read gender  
4 Read age  
5 Read race  
6 Read phoneNum  
7 Read PreUgGradCategory  
8 Read PreUstream  
9 Read PreUcgpaGrade  
10 Read MuetBand  
11 Read SPMresult  
12 Read PreUcgpa  
13 Read kokoMarks  
14 Counter = 0  
15 totalAge = 0  
16 male = 0  
17 female = 0  
18 Malay= 0  
19 Chinese = 0  
20 Indian = 0  
21 Others = 0  
22 STPM = 0  
23 Matriks = 0  
24 Foundation = 0  
25 Diploma = 0  
26 Alevel = 0  
27 Sains = 0  
28 Sastera = 0  
29 D = 0  
30 C = 0  
31 B = 0  
32 A = 0  
33 Do  
34 Counter = Counter + 1  
35 totalAge = totalAge + Age  
36 Calculate averageAge = (totalAge/Counter)  
37 If gender == "male" then  
38     male = male + 1  
39     Calculate PercentageOfMale = (male/Counter)*100  
40 Else  
41     female = female + 1  
42     Calculate PercentageOfFemale = (female/Counter)*100  
43 End if  
44 If race == "Malay" then  
45     Malay = Malay +1  
46     Calculate PercentageOfMalayStudents = (Malay/Counter)*100  
47 Else if race == "Chinese" then  
48     Chinese = Chinese +1  
49     Calculate PercentageOfChineseStudents = (Chinese/Counter)*100  
50 Else if race == "Indian" then
```

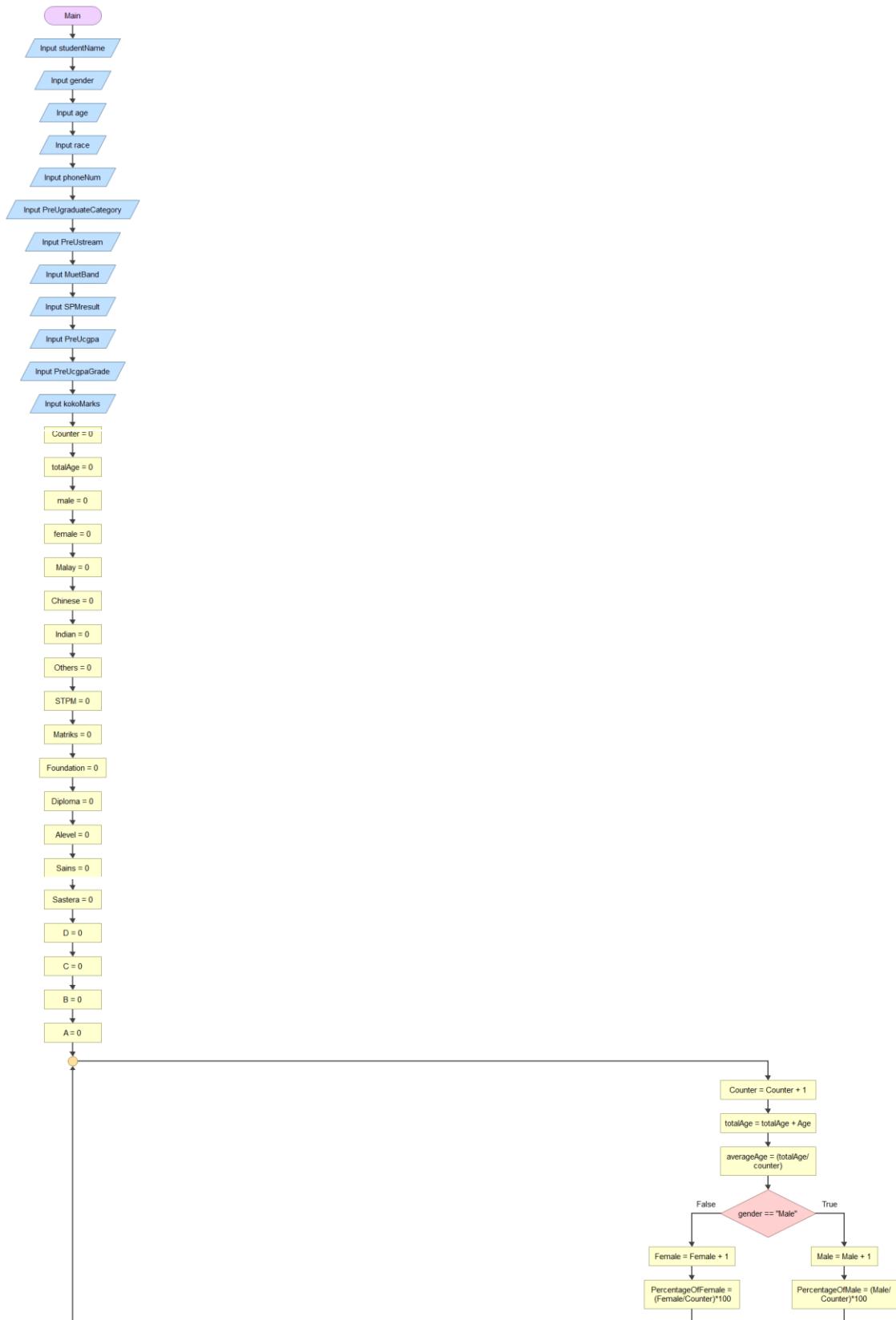
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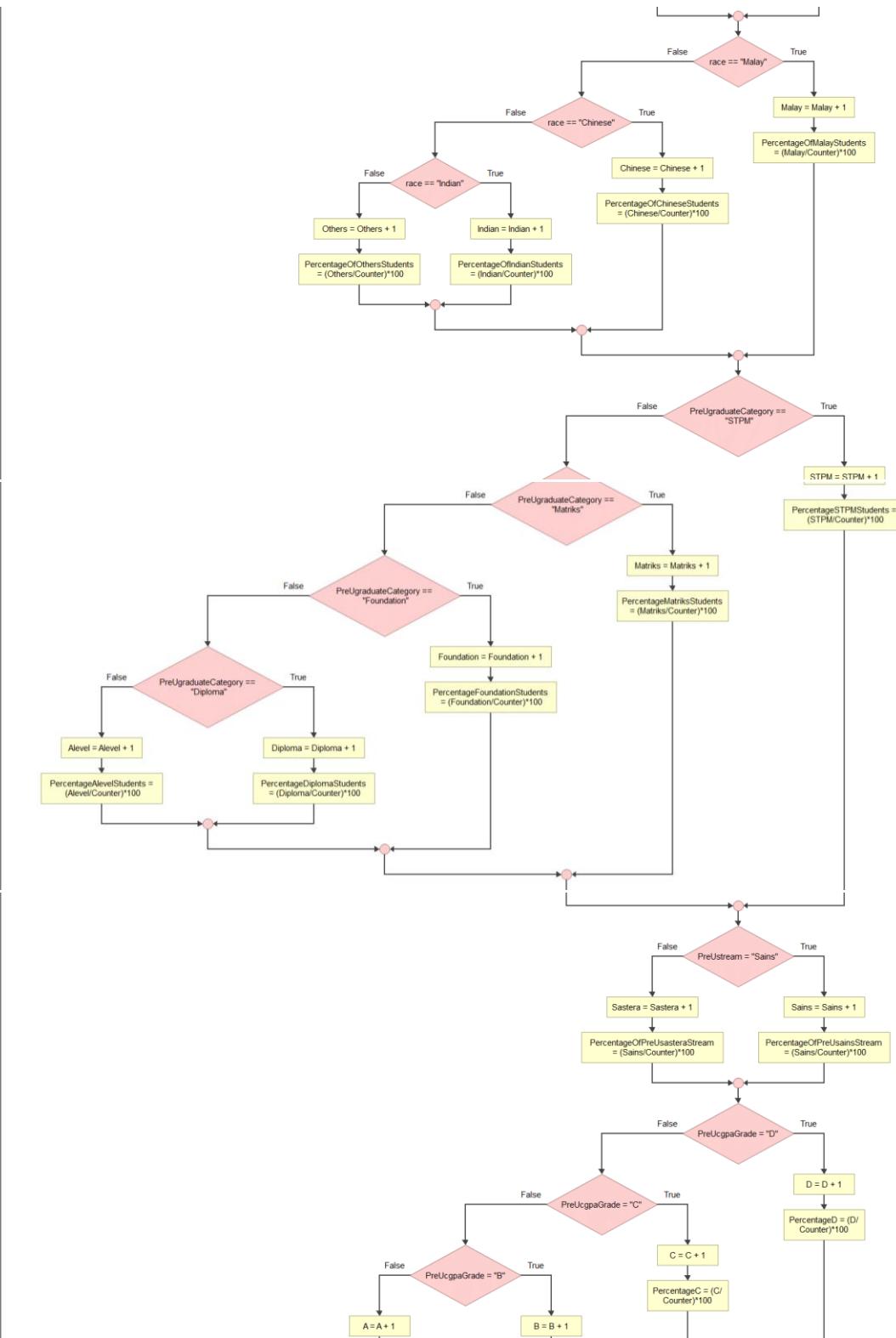
51     Indian = Indian +1
52     Calculate PercentageOfIndianStudents = (Indian/Counter)*100
53 Else
54     Others = Others + 1
55     Calculate PercentageOfOthersStudents = (Others/Counter)*100
56 End if
57 If PreUgraduateCategory == "STPM" then
58     STPM = STPM + 1
59     Calculate PercentageSTPMstudents = (STPM/Counter)*100
60 Else if PreUgraduateCategory == "Matriks" then
61     Matriks = Matriks + 1
62     Calculate PercentageMatriksStudents = (Matriks/Counter)*100
63 Else if PreUgraduateCategory == "Foundation" then
64     Foundation = Foundation + 1
65     Calculate PercentageFoundationStudents = (Foundation/Counter)*100
66 Else if PreUgraduateCategory == "Diploma" then
67     Diploma = Diploma + 1
68     Calculate PercentageDiplomaStudents = (Diploma/Counter)*100
69 Else
70     Alevel = Alevel + 1
71     Calculate PercentageAlevelStudents = (Alevel/Counter)*100
72 End if
73 If PreUstream == "Sains" then
74     Sains = Sains + 1
75     Calculate PercentagePreUsainsStream = (Sains/Counter)*100
76 Else
77     Sastera = Sastera + 1
78     Calculate PercentagePreUsasteraStream = (Sastera/Counter)*100
79 End if
80 If PreUcgpaGrade == "D" then
81     D = D + 1
82     Calculate PercentageD = (D/Counter)*100
83 Else if PreUcgpaGrade == "C" then
84     C = C + 1
85     Calculate PercentageC = (C/Counter)*100
86 Else if PreUcgpaGrade == "B" then
87     B = B + 1
88     Calculate PercentageB = (B/Counter)*100
89 Else
90     A = A + 1
91     Calculate PercentageA = (A/Counter)*100
92 End if
93 If PercentageA >= PercentageB & PercentageA >= PercentageC & PercentageA >= PercentageD then
94     Print HighestPercentagePreUcgpa = A
95 Else if PercentageB >= PercentageA & PercentageB >= PercentageC & PercentageB >= PercentageD then
96     Print HighestPercentagePreUcgpa = B
97 Else if PercentageC >= PercentageA & PercentageC >= PercentageB & PercentageC >= PercentageD then
98     Print HighestPercentagePreUcgpa = C
99 Else
100 Print HighestPercentagePreUcgpa = D

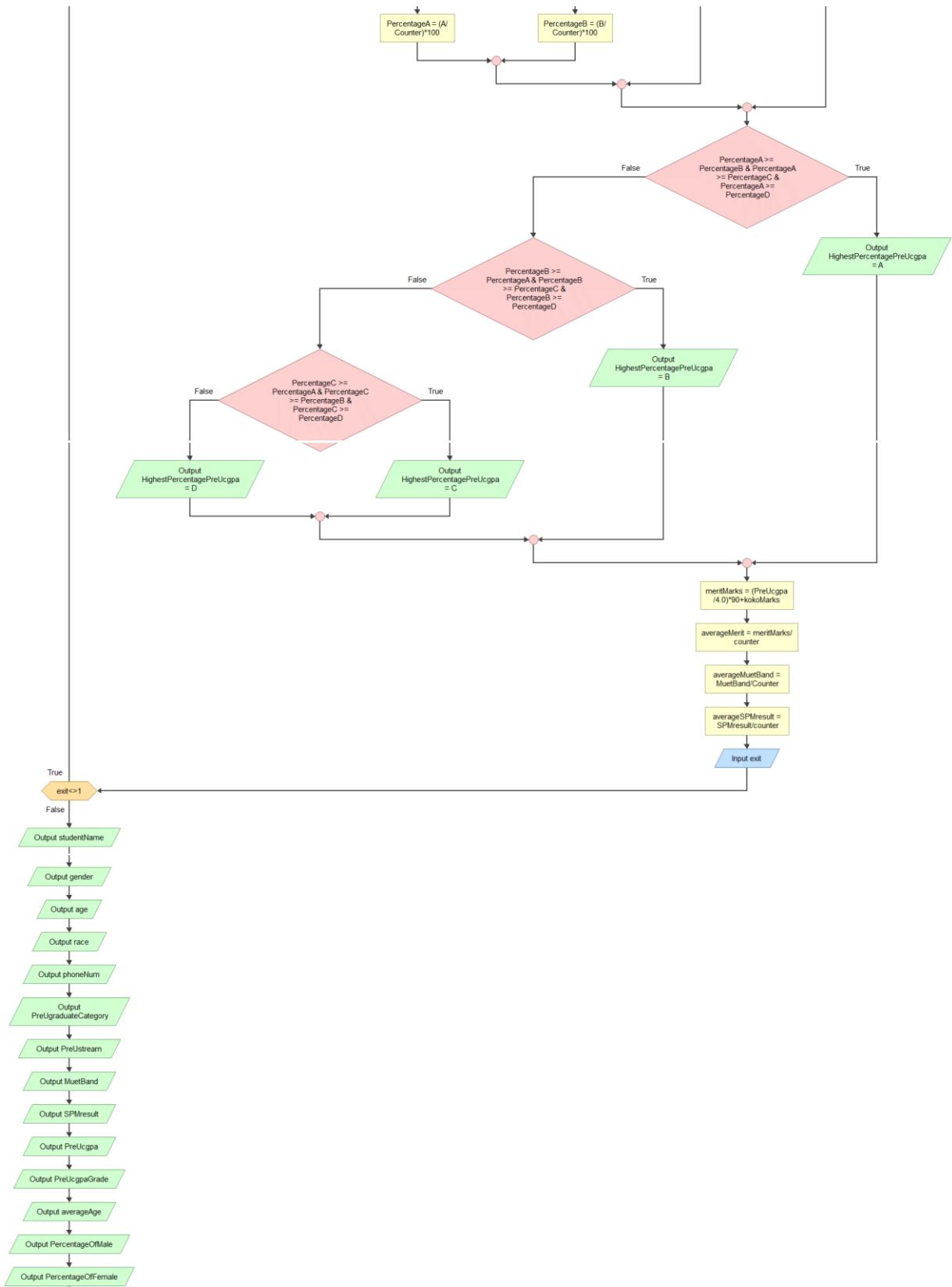
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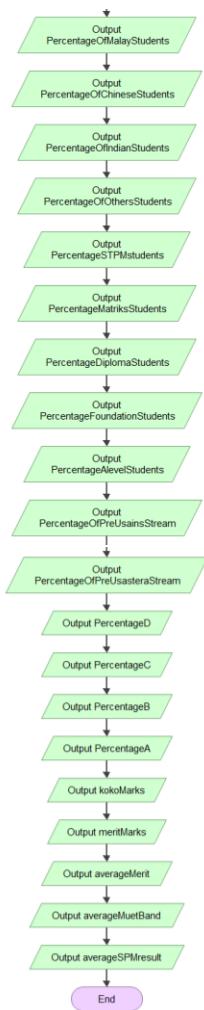
```
101 End if
102 Calculate meritMarks = (PreUcgpa/4.0)*90 + kokoMarks
103 Calculate averageMerit = meritMarks/Counter
104 Calculate averageMuetBand = MuetBand/Counter
105 Calculate averageSPMresult = SPMresult/Counter
106 Enter exit
107 While exit < > 1
108 Print studentName
109 Print gender
110 Print age
111 Print race
112 Print phoneNum
113 Print PreUgraduateCategory
114 Print PreUstream
115 Print PreUcgpaGrade
116 Print MuetBand
117 Print SPMresult
118 Print PreUcgpa
119 Print averageAge
120 Print PercentageOfMale
121 Print PercentageOfFemale
122 Print PercentageOfMalayStudents
123 Print PercentageOfChineseStudents
124 Print PercentageOfIndianStudents
125 Print PercentageOfOthersStudents
126 Print PercentageSTPMstudents
127 Print PercentageMatriksStudents
128 Print PercentageFoundationStudents
129 Print PercentageDiplomaStudents
130 Print PercentageAlevelStudents
131 Print PercentagePreUsainsStream
132 Print PercentagePreUsasteraStream
133 Print PercentageD
134 Print PercentageC
135 Print PercentageB
136 Print PercentageA
137 Print kokoMarks
138 Print meritMarks
139 Print averageMerit
140 Print averageMuetBand
141 Print averageSPMresult
142 End
```

Flowchart Without Module







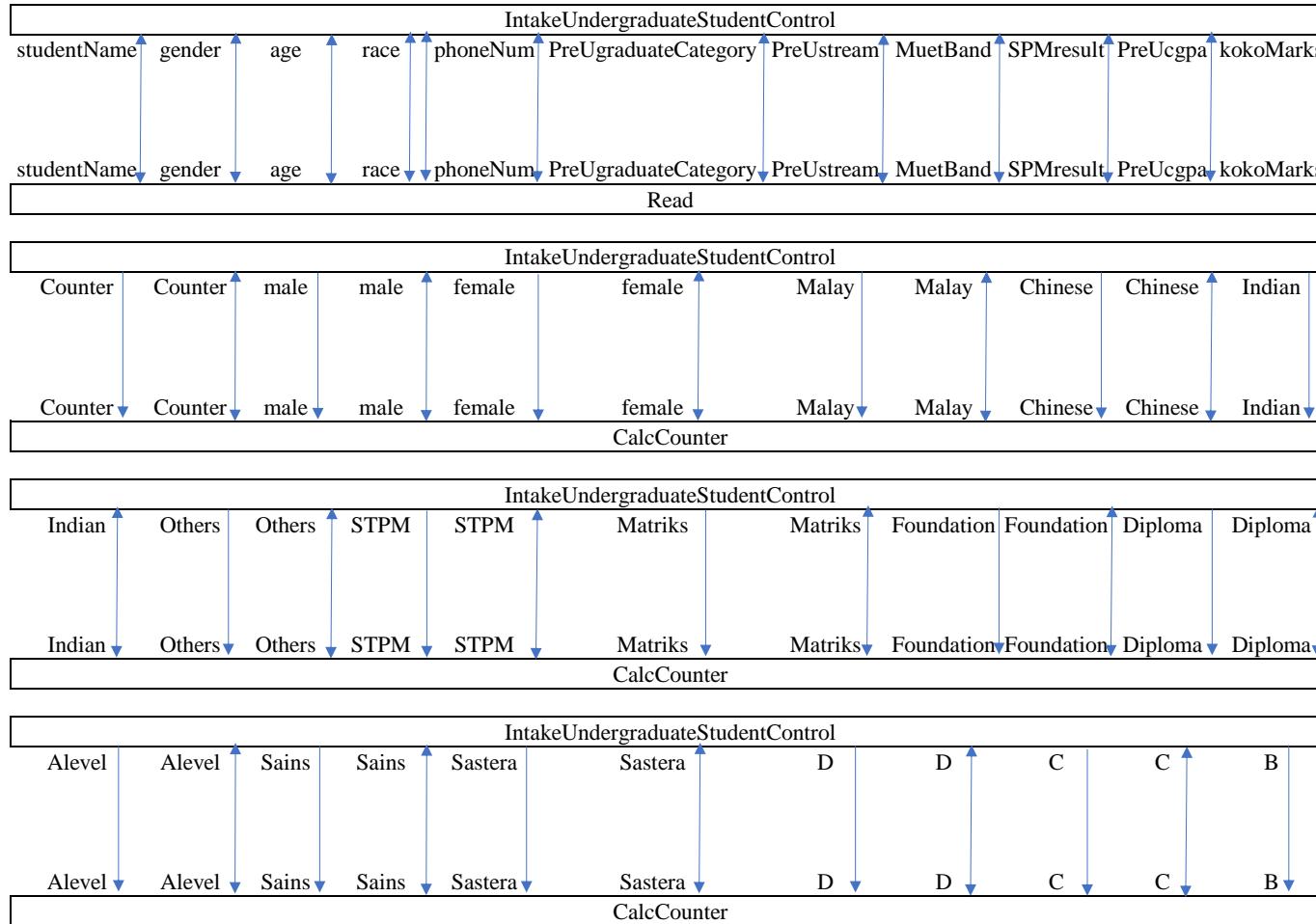


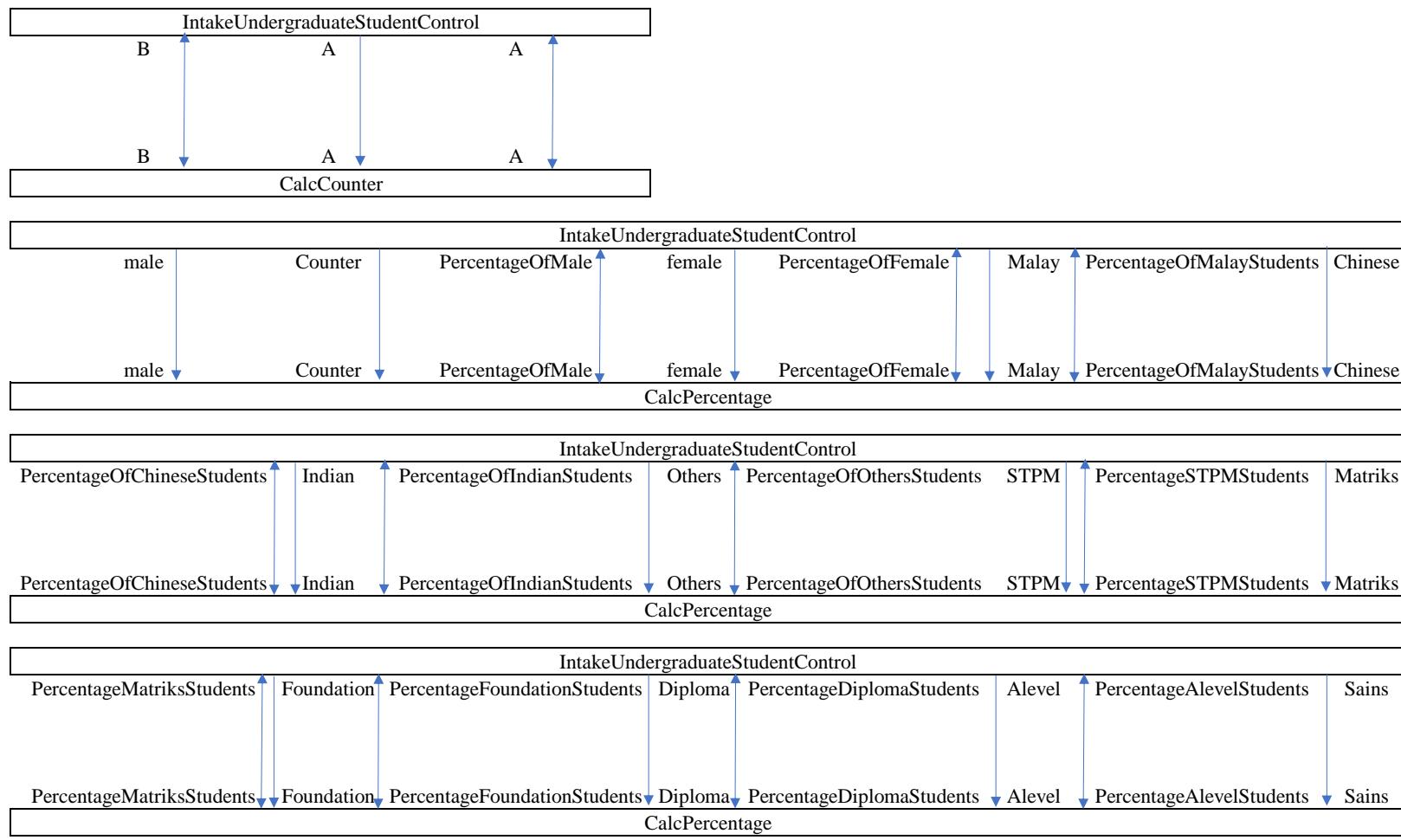
Desk Checking

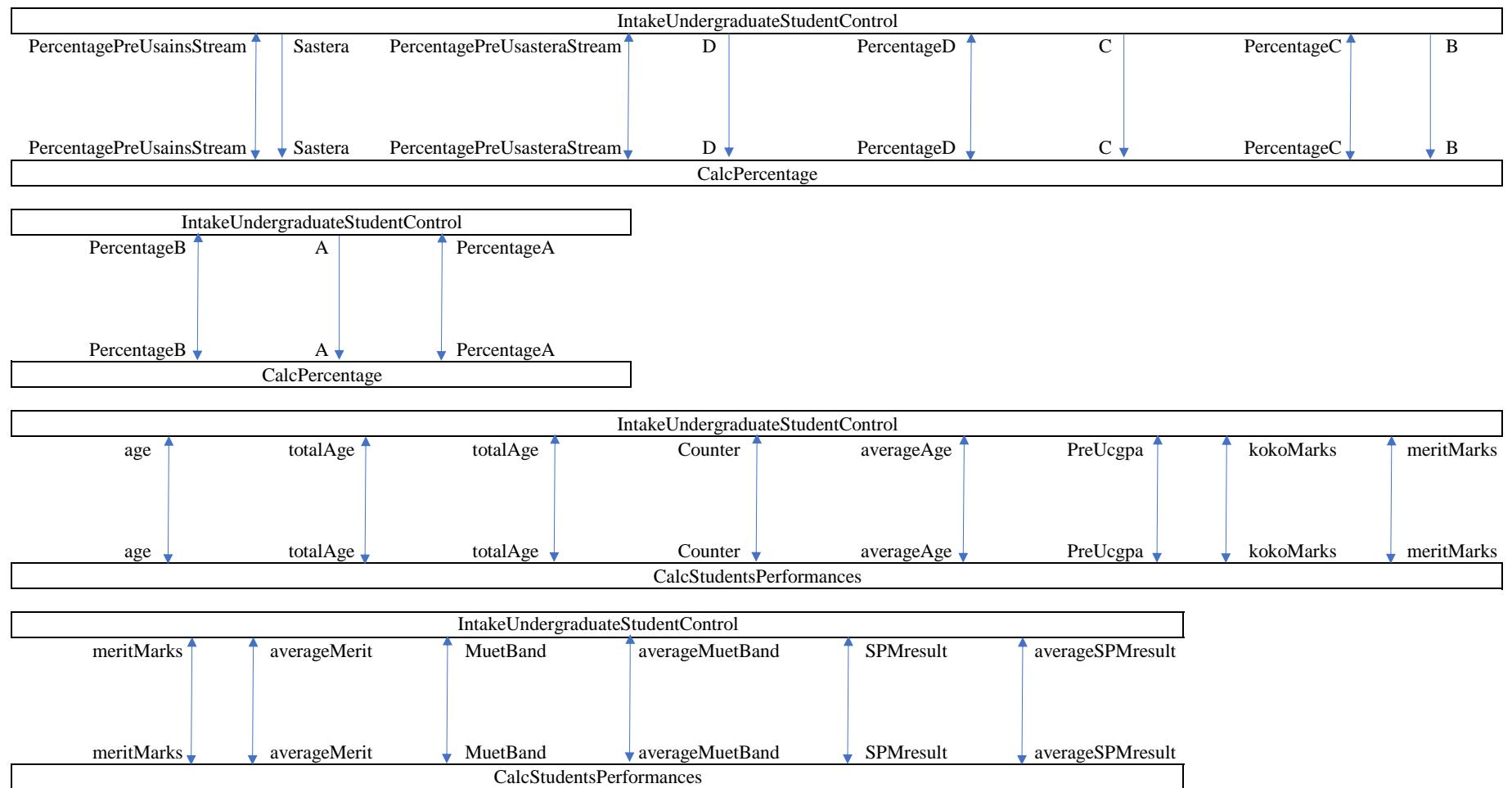
Number Line	Female	Percentage of Female	Malay	Percentage of Malay Students	Chinese	Percentage of Chinese Students	Indian	Percentage of Indian Students	Others	Percentage of Others Students
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41	female = female + 1									
42		PercentageOfFemale = (female/Counter)*100								
43										
44										
45			Malay = Malay + 1							
46				PercentageOfMalayStudents = (Malay/Counter)*100						
47										
48					Chinese = Chinese + 1					
49						PercentageOfChineseStudents = (Chinese/Counter)*100				
50										
52							PercentageOfIndianStudents = (Indian/Counter)*100			
53										
54								Others = Others + 1		
55									PercentageOthersStudents = (Others/Counter)*100	

Number Line	B	Percentage B	A	Percentage A	Merit Marks	Average Merit	Average Muet Band	Average SPM Result	Condition	Input/Output
56									If PreUgraduateCategory = = "STPM"? T	
57										
58										
59										
60									If PreUgraduateCategory = = "Matriks"? F	
61										
62										
63									If PreUgraduateCategory = = "Foundation"? F	
64										
65										
66									If PreUgraduateCategory = = "Diploma"? F	
67										
68										
69									If PreUgraduateCategory = = "Alevel"? F	
70										
71										
72										
73									If PreUstream = = "Sains"? F	
74										
75										
76									If PreUstream = = "Sastera"? T	
77										
78										
79										
80									If PreUcgpaGrade = = "D"? F	
81										
82										
83									If PreUcgpaGrade = = "C"? F	
84										
85										
86									If PreUcgpaGrade = = "B"? F	
87	B = B + 1									
88		PercentageB = (B/counter)*100								
89									If PreUcgpaGrade = = "A"? T	
90			A = A + 1							
91				PercentageA = (A/counter)*100						
92										
93									If PercentageA >= PercentageB & PercentageA >= PercentageC & PercentageA >= PercentageD ?	
94										HighestPercentagePreUcgpa = A
95									If PercentageB >= PercentageA & PercentageB >= PercentageC & PercentageB >= PercentageD	
96										HighestPercentagePreUcgpa = B

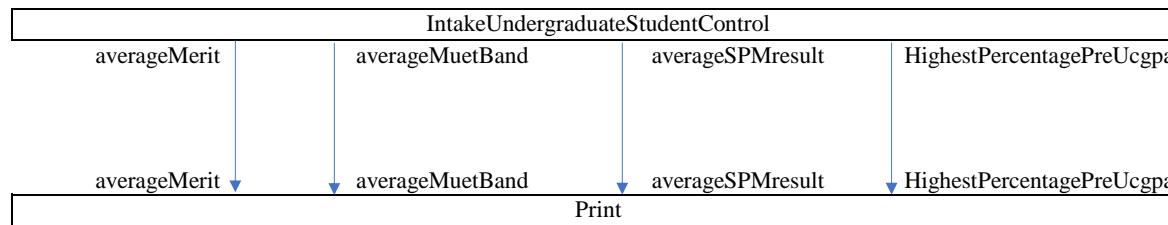
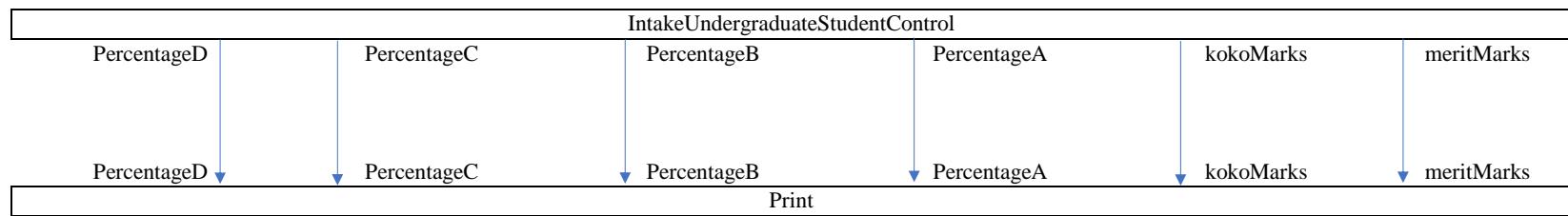
Coupling Diagram







IntakeUndergraduateStudentControl					
studentName	gender	age	race	phoneNum	PreUgreadateCategory
studentName	gender	age	race	phoneNum	PreUgreadateCategory
Print					
IntakeUndergraduateStudentControl					
PreUstream	MuetBand	SPMresult	PreUcgpa	averageAge	PercentageOfMale
PreUstream	MuetBand	SPMresult	PreUcgpa	averageAge	PercentageOfMale
Print					
IntakeUndergraduateStudentControl					
PercentageOfFemale	PercentageOfMalayStudents	PercentageOfChineseStudents	PercentageOfIndianStudents	PercentageOfOthersStudents	PercentageSTPMstudents
PercentageOfFemale	PercentageOfMalayStudents	PercentageOfChineseStudents	PercentageOfIndianStudents	PercentageOfOthersStudents	PercentageSTPMstudents
Print					
IntakeUndergraduateStudentControl					
PercentageMatriksStudents	PercentageFoundationStudents	PercentageDiplomaStudents	PercentageAlevelStudents	PercentagePreUsainsStream	PercentagePreUsasteraStream
PercentageMatriksStudents	PercentageFoundationStudents	PercentageDiplomaStudents	PercentageAlevelStudents	PercentagePreUsainsStream	PercentagePreUsasteraStream
Print					



Data Dictionary

Data Item	Variable Name	Data Type	Module
studentName	studentName	Character string	IntakeUndergraduateStudentControl/Read/Print
gender	gender	Character string	IntakeUndergraduateStudentControl/Read/Print
age	age	Numeric: integer	IntakeUndergraduateStudentControl/Read/CalcStudentsPerformances/Print
race	race	Character string	IntakeUndergraduateStudentControl/Read/Print
phoneNum	phoneNum	Character string	IntakeUndergraduateStudentControl/Read/Print
PreUgraduateCategory	PreUgraduateCategory	Character string	IntakeUndergraduateStudentControl/Read/Print
PreUstream	PreUstream	Character string	IntakeUndergraduateStudentControl/Read/Print
PreUcgpaGrade	PreUcgpaGrade	Character string	IntakeUndergraduateStudentControl/Read/Print
MuetBand	MuetBand	Numeric: real	IntakeUndergraduateStudentControl/Read/CalcStudentsPerformances/Print
SPMresult	SPMresult	Character string	IntakeUndergraduateStudentControl/Read/CalcStudentsPerformances/Print
PreUcgpa	PreUcgpa	Numeric: real	IntakeUndergraduateStudentControl/Read/CalcStudentsPerformances/Print
kokoMarks	kokoMarks	Numeric: real	IntakeUndergraduateStudentControl/Read/CalcStudentsPerformances/Print
Counter	Counter	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
TotalAge	TotalAge	Numeric: integer	IntakeUndergraduateStudentControl/CalcStudentsPerformances/Print
AverageAge	AverageAge	Numeric: integer	IntakeUndergraduateStudentControl/CalcStudentsPerformances/Print
male	male	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
female	female	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Malay	Malay	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Chinese	Chinese	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Indian	Indian	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Others	Others	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
STPM	STPM	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Matriks	Matriks	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Foundation	Foundation	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Diploma	Diploma	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Alevel	Alevel	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Sains	Sains	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
Sastera	Sastera	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
D	D	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
C	C	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
B	B	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
A	A	Numeric: integer	IntakeUndergraduateStudentControl/CalcCounter
PercentageOfMale	PercentageOfMale	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageOffFemale	PercentageOffFemale	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageOfMalayStudents	PercentageOfMalayStudents	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageOfChineseStudents	PercentageOfChineseStudents	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageOfIndianStudents	PercentageOfIndianStudents	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageOfOthersStudents	PercentageOfOthersStudents	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageSTPMstudents	PercentageSTPMstudents	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageMatriksStudents	PercentageMatriksStudents	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageFoundationStudents	PercentageFoundationStudents	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print

Data Item	Variable Name	Data Type	Module
PercentageDiplomaStudents	PercentageDiplomaStudents	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageAlevelStudents	PercentageAlevelStudents	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentagePreUsainsStream	PercentagePreUsainsStream	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentagePreUsasteraStream	PercentagePreUsasteraStream	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageD	PercentageD	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageC	PercentageC	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageB	PercentageB	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
PercentageA	PercentageA	Numeric: real	IntakeUndergraduateStudentControl/CalcPercentage/Print
HighestPercentagePreUcgpa	HighestPercentagePreUcgpa	Numeric: real	IntakeUndergraduateStudentControl/Print
meritMarks	meritMarks	Numeric: real	IntakeUndergraduateStudentControl/CalcStudentsPerformances/Print
averageMerit	averageMerit	Numeric: real	IntakeUndergraduateStudentControl/CalcStudentsPerformances/Print
averageMuetBand	averageMuetBand	Numeric: real	IntakeUndergraduateStudentControl/CalcStudentsPerformances/Print
averageSPMresult	averageSPMresult	Numeric: integer	IntakeUndergraduateStudentControl/CalcStudentsPerformances/Print

Algorithm With Module

```
IntakeUndergraduateStudentControl
Counter = 0
totalAge = 0
male = 0
female = 0
Malay= 0
Chinese = 0
Indian = 0
Others = 0
STPM = 0
Matriks = 0
Foundation = 0
Diploma = 0
Alevel = 0
Sains = 0
Sastera = 0
D = 0
C = 0
B = 0
A = 0
Do
    Process Read (*studentName, *gender, *age, *race, *phoneNum, *PreUgraduateCategory, *PreUstream, *MuetBand, *SPMresult, *PreUcgpa, *kokoMarks)

    Process CalcCounter (Counter, *Counter, male, *male, female, *female, Malay, *Malay, Chinese, *Chinese, Indian, *Indian, Others, *Others, STPM,
    *STPM, Matriks, *Matriks, Foundation, *Foundation, Diploma, *Diploma, Alevel, *Alevel, Sains, *Sains, Sastera, *Sastera, D, *D, C, *C, B, *B, A, *A)

    Process CalcPercentage (male, Counter, *PercentageOfMale, female, *PercentageOfFemale, Malay,
    *PercentageOfMalayStudents, Chinese, *PercentageOfChineseStudents, Indian, *PercentageOfIndianStudents, Others,
    *PercentageOfOthersStudents, STPM, *PercentageSTPMStudents, Matriks, *PercentageMatriksStudents, Foundation,
    *PercentageFoundationStudents, Diploma, *PercentageDiplomaStudents, Alevel, *PercentageAlevelStudents, Sains,
    *PercentagePreUsainsStream, Sastera, *PercentagePreUsasteraStream, D, *PercentageD, C, *PercentageC, B,
    *PercentageB, A, *PercentageA)

    Process CalcStudentsPerformances (age ,*totalAge, totalAge, Counter, *averageAge, PreUcgpa, kokoMarks, *meritMarks, meritMarks,
    *averageMerit, MuetBand, *averageMuetBand, SPMresult, *averageSPMresult)
```

Process Print (studentName, gender, age, race, phoneNum, PreUgraduateCategory, PreUstream, MuetBand, SPMresult, PreUcgpa, averageAge, PercentageOfMale, PercentageOfFemale, PercentageOfMalayStudents, PercentageOfChineseStudents, PercentageOfIndianStudents, PercentageOfOthersStudents, PercentageSTPMstudents, PercentageMatriksStudents, PercentageFoundationStudents, PercentageDiplomaStudents, PercentageAlevelStudents, PercentagePreUsainsStream, PercentagePreUsasteraStream, PercentageD, PercentageC, PercentageB, PercentageA, kokoMarks, meritMarks, averageMerit, averageMuetBand, averageSPMresult, HighestPercentagePreUcgpa)
End

Read (*studentName, *gender, *age, *race, *phoneNum, *PreUgraduateCategory, *PreUstream, *MuetBand, *SPMresult, *PreUcgpa, *kokoMarks)
Enter studentName, gender, age, race, phoneNum, PreUgraduateCategory, PreUstream, MuetBand, SPMresult, PreUcgpa, kokoMarks
Exit

Calc Counter (Counter, *Counter, male, *male, female, *female, Malay, *Malay, Chinese, *Chinese, Indian, *Indian, Others, *Others, STPM, *STPM, Matriks, *Matriks, Foundation, *Foundation, Diploma, *Diploma, Alevel, *Alevel, Sains, *Sains, Sastera, *Sastera, D, *D, C, *C, B, *B, A, *A)

Counter = Counter + 1

If gender == "male" then

 male = male + 1

Else

 female = female + 1

End if

If race == "Malay" then

 Malay = Malay +1

Else if race == "Chinese" then

 Chinese = Chinese +1

Else if race == "Indian" then

 Indian = Indian +1

Else

 Others = Others + 1

End if

If PreUgraduateCategory == "STPM" then

 STPM = STPM + 1

Else if PreUgraduateCategory == "Matriks" then

 Matriks = Matriks + 1

Else if PreUgraduateCategory == "Foundation" then

 Foundation = Foundation + 1

Else if PreUgraduateCategory == "Diploma" then

 Diploma = Diploma + 1

Else

 Alevel = Alevel + 1

End if

If PreUstream == "Sains" then

 Sains = Sains + 1

```

Else
    Sastera = Sastera + 1
End if
If PreUcgpaGrade == "D" then
    D = D + 1
Else if PreUcgpaGrade == "C" then
    C = C + 1
Else if PreUcgpaGrade == "B" then
    B = B + 1
Else
    A = A + 1
End if
Exit

CalcPercentage(male, Counter, *PercentageOfMale, female, *PercentageOfFemale, Malay,
*PercentageOfMalayStudents, Chinese, *PercentageOfChineseStudents, Indian, *PercentageOfIndianStudents, Others,
*PercentageOfOthersStudents, STPM, *PercentageSTPMStudents, Matriks, *PercentageMatriksStudents, Foundation,
* PercentageFoundationStudents, Diploma, *PercentageDiplomaStudents, Alevel, * PercentageAlevelStudents, Sains,
*PercentagePreUsainsStream, Sastera, *PercentagePreUsasteraStream, D, *PercentageD, C, *PercentageC, B,
*PercentageB, A, *PercentageA)
If gender == "male" then
    PercentageOfMale = (male/Counter)*100
Else
    PercentageOfFemale = (female/Counter)*100
End if
If race == "Malay" then
    PercentageOfMalayStudents = (Malay/Counter)*100
Else if race == "Chinese" then
    PercentageOfChineseStudents = (Chinese/Counter)*100
Else if race == "Indian" then
    PercentageOfIndianStudents = (Indian/Counter)*100
Else
    PercentageOfOthersStudents = (Others/Counter)*100
End if
If PreUgraduateCategory == "STPM" then
    PercentageSTPMstudents = (STPM/Counter)*100
Else if PreUgraduateCategory == "Matriks" then
    PercentageMatriksStudents = (Matriks/Counter)*100
Else if PreUgraduateCategory == "Foundation" then
    PercentageFoundationStudents = (Foundation/Counter)*100
Else if PreUgraduateCategory == "Diploma" then

```

```

PercentageDiplomaStudents = (Diploma/Counter)*100
Else
    PercentageAlevelStudents = (Alevel/Counter)*100
End if
If PreUstream == "Sains" then
    PercentagePreUsainsStream = (Sains/Counter)*100
Else
    PercentagePreUsasteraStream = (Sastera/Counter)*100
End if
If PreUcgpaGrade == "D" then
    PercentageD = (D/Counter)*100
Else if PreUcgpaGrade == "C" then
    PercentageC = (C/Counter)*100
Else if PreUcgpaGrade == "B" then
    PercentageB = (B/Counter)*100
Else
    PercentageA = (A/Counter)*100
End if
Exit

```

CalcStudentsPerformances (age ,*totalAge, totalAge, Counter, *averageAge, PreUcgpa, kokoMarks, *meritMarks, meritMarks,
 *averageMerit, MuetBand, *averageMuetBand, SPMresult, *averageSPMresult)

```

totalAge = totalAge + age
averageAge = (totalAge/Counter)
meritMarks = (PreUcgpa/4.0)*90 + kokoMarks
averageMerit = meritMarks/Counter
averageMuetBand = MuetBand/Counter
averageSPMresult = SPMresult/Counter
Exit

```

Print (studentName, gender, age, race, phoneNum, PreUgraduateCategory, PreUstream, MuetBand, SPMresult, PreUcgpa, averageAge,
 PercentageOfMale, PercentageOfFemale, PercentageOfMalayStudents, PercentageOfChineseStudents, PercentageOfIndianStudents, PercentageOfOthersStudents,
 PercentageSTPMstudents, PercentageMatriksStudents, PercentageFoundationStudents, PercentageDiplomaStudents, PercentageAlevelStudents,
 PercentagePreUsainsStream, PercentagePreUsasteraStream, PercentageD, PercentageC, PercentageB, PercentageA, kokoMarks, meritMarks, averageMerit,
 averageMuetBand, averageSPMresult, HighestPercentagePreUcgpa)

```

Print studentName, gender, age, race, phoneNum, PreUgraduateCategory, PreUstream, MuetBand, SPMresult, PreUcgpa, averageAge,  

PercentageOfMale, PercentageOfFemale, PercentageOfMalayStudents, PercentageOfChineseStudents, PercentageOfIndianStudents, PercentageOfOthersStudents,  

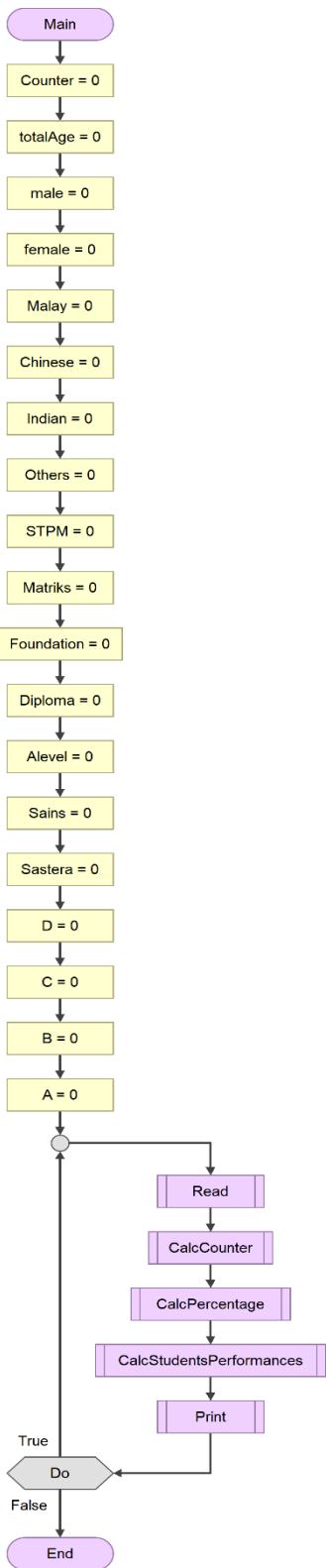
PercentageSTPMstudents, PercentageMatriksStudents, PercentageFoundationStudents, PercentageDiplomaStudents, PercentageAlevelStudents,  

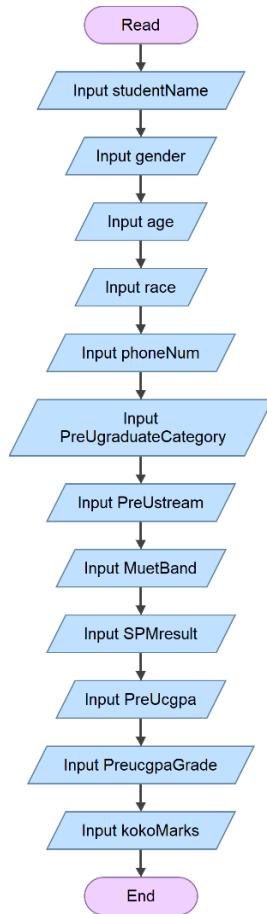
PercentagePreUsainsStream, PercentagePreUsasteraStream, PercentageD, PercentageC, PercentageB, PercentageA, kokoMarks, meritMarks, averageMerit,  

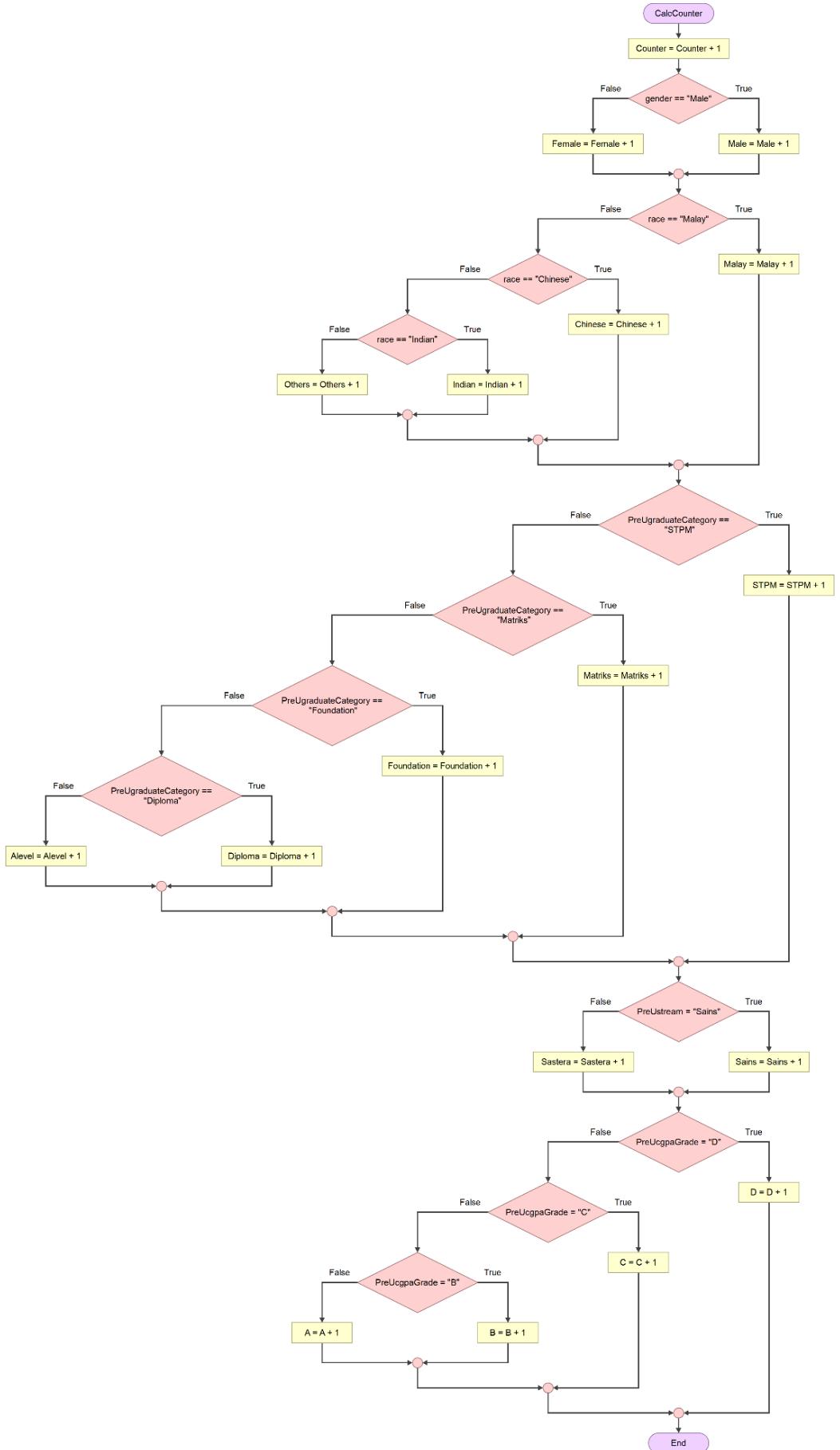
averageMuetBand, averageSPMresult, HighestPercentagePreUcgpa
Exit

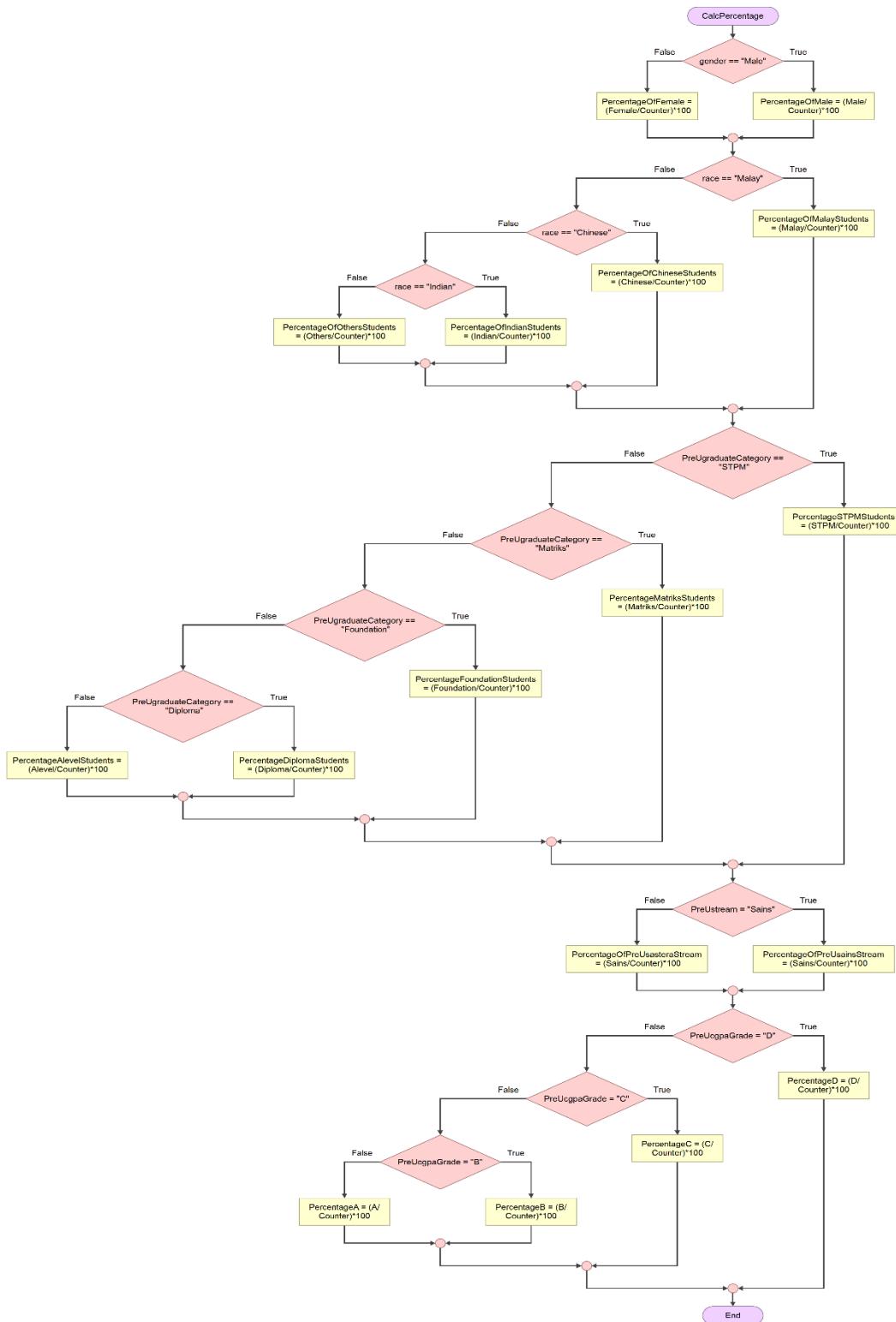
```

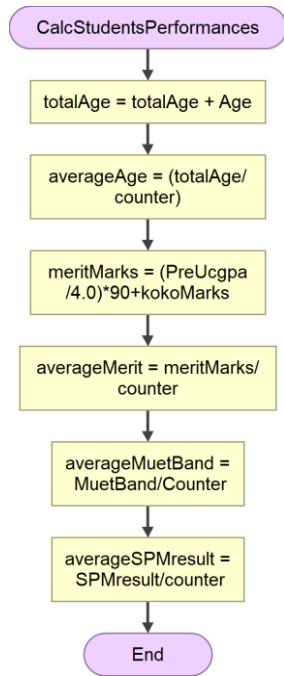
Flowchart With Module

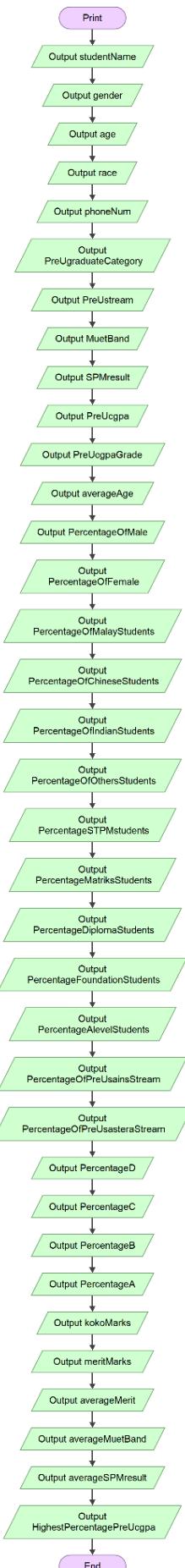












```
#include <stdio.h>
#include <string.h>

int main()
{
    char studentName [100];
    char gender [6];
    int age;
    char race [10];
    char phoneNum [10];
    char PreUgraduateCategory [10];
    char PreUstream [7];
    char PreUcgpaGrade[1];
    double MuetBand;
    int SPMresult;
    double PreUcgpa;
    double kokoMarks;

    printf("Enter your name: \n");
    fflush(stdin);
    gets (studentName);

    printf("Enter gender: \n");
    scanf("%s", &gender);

    printf("Enter age: \n");
    scanf("%d", &age);

    printf("Enter race: \n");
    scanf("%s", &race);

    printf("Enter phoneNum: \n");
    fflush(stdin);
    gets(phoneNum);

    printf("Enter Pre-University Graduate Category: \n");
    scanf("%s", &PreUgraduateCategory);

    printf("Enter Pre-University Stream: \n");
    scanf("%s", &PreUstream);

    printf("Enter Pre-University cgpa Grade: \n");
    scanf("%s", &PreUcgpaGrade);

    printf("Enter Muet Band: \n");
    scanf("%lf", &MuetBand);

    printf("Enter SPM result: \n");
    scanf("%d", &SPMresult);

    printf("Enter Pre-University cgpa: \n");
    scanf("%lf", &PreUcgpa);

    printf("Enter Koko Marks: \n");
    scanf("%lf", &kokoMarks);

    int Counter;
    int totalAge;
```

```
int male;
int female;
int Malay;
int Chinese;
int Indian;
    int Others;
int STPM;
    int Matriks;
    int Foundation;
    int Diploma;
    int Alevel;
    int Sains;
    int Sastera;
    int D;
    int C;
    int B;
    int A;
    int averageAge;
double PercentageOfMale;
double PercentageOfFemale;
double PercentageOfMalayStudents;
double PercentageOfChineseStudents;
double PercentageOfIndianStudents;
double PercentageOfOthersStudents;
double PercentageSTPMstudents;
double PercentageMatriksStudents;
double PercentageFoundationStudents;
double PercentageDiplomaStudents;
double PercentageAlevelStudents;
double PercentagePreUsainsStream;
double PercentagePreUsasteraStream;
double PercentageD;
double PercentageC;
double PercentageB;
double PercentageA;
double meritMarks;
double averageMerit;
double averageMuetBand;
int averageSPMresult;
int exit;
```

```
Counter = 0;
totalAge = 0;
male = 0;
female = 0;
Malay= 0;
Chinese = 0;
    Indian = 0;
    Others = 0;
STPM = 0;
    Matriks = 0;
    Foundation = 0;
    Diploma = 0;
    Alevel = 0;
    Sains = 0;
    Sastera = 0;
D = 0;
```

```

C = 0;
B = 0;
A = 0;

do
{
    Counter++;
    totalAge = totalAge + age;

    averageAge = (totalAge/Counter);

    if (strcmp(gender, "male") == 0) {
        male++; PercentageOfMale = (male/Counter)*100; }
    else
        {female++; }
        {PercentageOfFemale = (female/Counter)*100; }

    if (strcmp(race, "Malay") == 0){
        Malay++; PercentageOfMalayStudents = (Malay/Counter)*100; }
    else if (strcmp(race, "Chinese") == 0){
        Chinese++; PercentageOfChineseStudents =
(Chinese/Counter)*100; }
    else if (strcmp(race, "Indian") == 0){
        Indian++; PercentageOfIndianStudents = (Indian/Counter)*100;
    }
    else
    {
        Others++;
    }
    {
        PercentageOfOthersStudents = (Others/Counter)*100;
    }

    if (strcmp(PreUgraduateCategory, "STPM") == 0){
        STPM++;
        PercentageSTPMstudents = (STPM/Counter)*100;
    }
    else if (strcmp(PreUgraduateCategory, "Matriks") == 0){
        Matriks++;
        PercentageMatriksStudents = (Matriks/Counter)*100;
    }
    else if (strcmp(PreUgraduateCategory, "Foundation") == 0){
        Foundation++;
        PercentageFoundationStudents = (Foundation/Counter)*100;
    }
    else if (strcmp(PreUgraduateCategory, "Diploma") == 0){
        Diploma++;
        PercentageDiplomaStudents = (Diploma/Counter)*100;
    }
    else {
        Alevel++; PercentageAlevelStudents = (Alevel/Counter)*100;
    }

    if (strcmp(PreUstream, "Sains") == 0){
        Sains++;
    }
}

```

```

        PercentagePreUsainsStream = (Sains/Counter)*100;
    }
    else {
        Sastera++;
        PercentagePreUsasteraStream = (Sastera/Counter)*100;
    }

    if (strcmp(PreUcgpaGrade, "D") == 0) {
        D++;
        PercentageD = (D/Counter)*100;
    }
    else if (strcmp(PreUcgpaGrade, "C") == 0) {
        C++;
        PercentageC = (C/Counter)*100;
    }
    else if (strcmp(PreUcgpaGrade, "B") == 0) {
        B++;
        PercentageB = (B/Counter)*100;
    }
    else {
        A++;
        PercentageA = (A/Counter)*100;
    }

    if (PercentageA >= PercentageB & PercentageA >= PercentageC &
PercentageA >= PercentageD)
    {
        printf("Highest Percentage Pre-U cgpa is grade A \n");
    }
    else if (PercentageB >= PercentageA & PercentageB >= PercentageC &
PercentageB >= PercentageD)
    {
        printf("Highest Percentage Pre-U cgpa is grade B \n");
    }
    else if (PercentageC >= PercentageA & PercentageC >= PercentageB &
PercentageC >= PercentageD)
    {
        printf("Highest Percentage Pre-U cgpa is grade C \n");
    }
    else {
        printf("Highest Percentage Pre-U cgpa is grade D \n");
    }

meritMarks = (PreUcgpa/4.0)*90 + kokoMarks;

averageMerit = meritMarks/Counter;

averageMuetBand = MuetBand/Counter;

averageSPMresult = SPMresult/Counter;

printf("Are you complete to fill up all the information: ");

```

```

        scanf("%d", &exit);

    }while (exit!=1);

    printf ("Name : %s \n", studentName);
    printf ("Gender : %s \n", gender);
    printf ("Age : %d \n", age);
    printf ("Race : %s \n", race);
    printf ("Phone Number : %s \n", phoneNum);
    printf ("Pre-University Graduate Category : %s \n",
PreUgraduateCategory);
    printf ("Pre-University Stream : %s \n", PreUstream);
    printf ("Pre-University cgpa Grade : %c \n", PreUcgpaGrade);
    printf ("MuetBand : %.1lf \n", MuetBand);
    printf ("SPMresult : %d A \n", SPMresult);
    printf ("Pre-University cgpa : %.2lf \n", PreUcgpa);
    printf ("Average Age : %d \n", averageAge);
    printf ("Percentage of Male : %.2lf %% \n", PercentageOfMale);
    printf ("Percentage of Female : %.2lf %% \n",
PercentageOfFemale);
    printf ("Percentage of Malay Students : %.2lf %% \n",
PercentageOfMalayStudents);
    printf ("Percentage of Chinese Students : %.2lf %% \n",
PercentageOfChineseStudents);
    printf ("Percentage of Indian Students : %.2lf %% \n",
PercentageOfIndianStudents);
    printf ("Percentage of Others Students : %.2lf %% \n",
PercentageOfOthersStudents);
    printf ("Percentage of SPM Students : %.2lf %% \n",
PercentageSTPMstudents);
    printf ("Percentage of Matriks Students : %.2lf %% \n",
PercentageMatriksStudents);
    printf ("Percentage of Diploma Students : %.2lf %% \n",
PercentageDiplomaStudents);
    printf ("Percentage of Foundation Students : %.2lf %% \n",
PercentageFoundationStudents);
    printf ("Percentage of A-level Students : %.2lf %% \n",
PercentageAlevelStudents);
    printf ("Percentage Pre-University Sains Stream : %.2lf %% \n",
PercentagePreUsainsStream);
    printf ("Percentage Pre-University Sastera Stream : %.2lf %% \n",
PercentagePreUsasteraStream);
    printf ("Percentage D : %.2lf %%\n", PercentageD);
    printf ("Percentage C : %.2lf %%\n", PercentageC);
    printf ("Percentage B : %.2lf %%\n", PercentageB);
    printf ("Percentage A : %.2lf %% \n", PercentageA);
    printf ("Koko Marks : %.2lf \n", kokoMarks);
    printf ("Merit Marks : %.2lf %%\n", meritMarks);
    printf ("Average Merit : %.2lf %%\n", averageMerit);
    printf ("Average Muet Band : %.2lf \n", averageMuetBand);
    printf ("Average SPM Result : %dA \n", averageSPMresult);

    return 0;
}

```



اونيفرسيتي مليسيا فھع
UNIVERSITI MALAYSIA PAHANG

INVESTIGATE THE INTAKE OF
UNDERGRADUATE STUDENTS
IN UNIVERSITY MALAYSIA PAHANG

SISWA UMP

STUDENT INFORMATION

NAME

EG : JANICE

PHONE NUMBER

EG : 011-3491 8761

GENDER

EG : FEMALE

PRE-UNIVERSITY GRADUATE CATEGORY

EG : STPM

AGE

EG : 20

PRE-UNIVERSITY STREAM

EG : SASTERA

RACE

EG : CHINESE



SISWA UMP

STUDENT PERFORMANCE

PRE-UNIVERSITY CGPA GRADE

EG : A

PRE-UNIVERSITY CGPA

EG : 3.6

MUET BAND

EG : 4.0

KOKO MARKS

EG : 8.2

SPM RESULT

EG : 9

SISWA UMP

INTAKE UNDERGRADUATE STUDENTS

NAME

JANICE

PRE-UNIVERSITY GRADUATE CATEGORY

STPM

GENDER

FEMALE

PRE-UNIVERSITY STREAM

SASTERA

AGE

20

PRE-UNIVERSITY CGPA GRADE

A

RACE

CHINESE

MUET BAND

4.0

PHONE NUMBER

011-3491 8761

SPM RESULT

EG : 9

SISWA UMP

INTAKE UNDERGRADUATE STUDENTS

PRE-UNIVERSITY CGPA

3.6

AVERAGE AGE

20

PERCENTAGE OF MALE

0%

PERCENTAGE OF FEMALE

100%

PERCENTAGE OF MALAY STUDENTS

0%

PERCENTAGE OF CHINESE STUDENTS

100%

PERCENTAGE OF INDIAN STUDENTS

0%

PERCENTAGE OF OTHERS RACE STUDENTS

0%

PERCENTAGE OF STPM STUDENTS

100%

PERCENTAGE OF MATRIKS STUDENTS

0%

SISWA UMP

INTAKE UNDERGRADUATE STUDENTS

PERCENTAGE OF FOUNDATION STUDENTS

0%

PERCENTAGE OF A-LEVEL STUDENTS

0%

TOTAL PRE-UNIVERSITY SAINS STREAM

0

TOTAL PRE-UNIVERSITY SASTERA STREAM

1

PERCENTAGE D

0%

PERCENTAGE C

0%

PERCENTAGE B

0%

PERCENTAGE A

100%

KOKO MARKS

8.2

MERIT MARKS

89.2%

SISWA UMP

INTAKE UNDERGRADUATE STUDENTS

AVERAGE MERIT

89.2%

AVERAGE MUET BAND

4

AVERAGE SPM RESULT

9

